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=> d his 1

     (FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE, WPIDS, SCISEARCH, AGRICOLA'
     ENTERED AT 09:36:45 ON 23 AUG 2004)
L21            65 DUP REM L20 (47 DUPLICATES REMOVED)

=> d que l21
L1            351 SEA ARTISS J?/AU
L2           1007 SEA JEN C?/AU
L3           1356 SEA L1 OR L2
L4             26 SEA L3 AND ALPHA(3A) CYCLODEXTRIN#
L5             25 SEA L4 AND FAT?
L6              2 SEA L5 AND BIOAVAILAB?
L7          13554 SEA ALPHA(3A) CYCLODEXTRIN#
L8            375 SEA L7 AND (FAT OR FATS OR LIPID?)
L9          45654 SEA (FAT OR FATS OR LIPID?)(3A)(BIOAVAILAB? OR AVAILAB? OR
                  ABSOR? OR COMPLEX? OR SEQUEST?)
L10            68 SEA L8 AND L9
L12         21582 SEA (FAT OR FATS OR LIPID?)(3A) BIND?
L13             6 SEA L12 AND L8
L14             7 SEA L7 AND FARIN?
L15             3 SEA L8 AND CONSUM?
L16            34 SEA L8 AND DIET?
L17            39 SEA L8 AND FOOD?
L19            35 SEA (L16 OR L17) NOT PD>20020819
L20           112 SEA L6 OR L10 OR (L13 OR L14 OR L15) OR L19
L21            65 DUP REM L20 (47 DUPLICATES REMOVED)


=> d ibib abs l21 1-65

L21  ANSWER 1 OF 65  HCAPLUS  COPYRIGHT 2004.ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2004:162548  HCAPLUS
DOCUMENT NUMBER:          140:198675
TITLE:                    Compositions comprising α -
                          cyclodextrin as dietary fat
                          complexer and methods for their use in
                          reducing diets.
INVENTOR(S):              Jen, Catherine; Artiss, Joseph D.
PATENT ASSIGNEE(S):       Art Jen Complexus, Inc., Can.
SOURCE:                   PCT Int. Appl., 60 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     WO 2004016101         A2    20040226    WO 2003-US23291          20030729
     WO 2004016101         A3    20040429
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
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CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004120984 A1 20040624 US 2003-628475 20030729
PRIORITY APPLN. INFO.: US 2002-404366P P 20020819
US 2003-461847P P 20030411
US 2003-486440P P 20030714

AB This invention relates to **fat** containing **consumable** food products comprising α **-cyclodextrin.** The food products have reduced levels of **bioavailable fat** but have substantially the same **fat**, cholesterol and caloric content as a like food without α **-cyclodextrin.** The invention also relates to methods for reducing the **bioavailability** of **fats** in **fat** containing food products without reducing caloric intake as determined by bomb calorimetry and to methods for increasing high d. lipoproteins in a subject and reducing or controlling weight by administering the food products of this invention.

L21 ANSWER 2 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:490442 HCAPLUS
DOCUMENT NUMBER: 141:53330
TITLE: Food products containing cyclodextrins having beneficial hypocholesterolemic effects and methods of manufacture and use.
INVENTOR(S): Plank, David W.; Lewandowski, Daniel J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004116382	A1	20040617	US 2002-318445	20021213
WO 2004054383	A1	20040701	WO 2003-US36481	20031117

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-318445 A 20021213
AB More specifically, the present invention is directed to the use of . **alpha.-cyclodextrin** in the preparation of food products to lower harmful cholesterol levels. The food product provides beneficial hypocholesterolemic activity through increased bile acid and **lipid binding** activity while simultaneously delivering a food product which is not adversely affected by its inclusion, either in taste or texture or in any undesirable side effects.

L21 ANSWER 3 OF 65 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN DUPLICATE 2

ACCESSION NUMBER: 2004180933 EMBASE
TITLE: Effects of α - and β-**cyclodextrin** complexation on the physico-chemical properties and antioxidant activity of some 3-hydroxyflavones.
AUTHOR: Calabro M.L.; Tommasini S.; Donato P.; Raneri D.; Stancanelli R.; Ficarra P.; Ficarra R.; Costa C.; Catania S.; Rustichelli C.; Gamberini G.
CORPORATE SOURCE: S. Tommasini, Dipartimento Farmaco-Chimico, Facolta di Farmacia, Universita di Messina, Viale Annunziata, 98168 Messina (ME), Italy. stommasi@pharma.unime.it
SOURCE: Journal of Pharmaceutical and Biomedical Analysis, (16 Apr 2004) 35/2 (365-377).
Refs: 45
ISSN: 0731-7085 CODEN: JPBADA
PUBLISHER IDENT.: S 0731-7085(03)00700-3
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Inclusion complexes of some flavonols (3-hydroxyflavone, morin and quercetin) have been obtained with α - and β-**cyclodextrins**, by the co-evaporation method. Different analytical techniques (DSC, XRPD, FT-IR, (1)H-NMR, UV-Vis) have been employed for a throughout investigation of the structural characteristics of such supramolecular aggregates, which exhibited distinct spectroscopic features and properties from both "guest" and "host" molecules. The stoichiometric ratios and stability constants describing the extent of formation of the complexes have been determined by phase-solubility studies; in all cases type-A(L) diagrams have been obtained (soluble 1:1 complexes). The effect of molecular encapsulation on the flavonols antioxidant activity has been afterwards evaluated, by means of different biological assays (Bathophenanthroline test; Comet assay; **Lipid** peroxidation). **Complexation** with cyclodextrins further improved the antioxidant activity, increasing drugs solubility in the biological moiety.

L21 ANSWER 4 OF 65 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2004165697 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14717658
TITLE: Heparan sulphate proteoglycans modulate fibroblast growth factor-2 **binding** through a **lipid** raft-mediated mechanism.
AUTHOR: Chu Chia Lin; Buczek-Thomas Jo Ann; Nugent Matthew A
CORPORATE SOURCE: Department of Pathology and Laboratory Medicine, Boston University School of Medicine, Boston, MA 02118, USA.
CONTRACT NUMBER: HL46902 (NHLBI)
HL56200 (NHLBI)
SOURCE: Biochemical journal, (2004 Apr 15) 379 (Pt 2) 331-41.
Journal code: 2984726R. ISSN: 1470-8728.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200407
ENTRY DATE: Entered STN: 20040403

Date X

Last Updated on STN: 20040723
Entered Medline: 20040722

AB We investigated how **lipid** raft association of HSPG (heparan sulphate proteoglycans) modulates FGF-2 (fibroblast growth factor-2/basic fibroblast growth factor) interactions with vascular smooth-muscle cells. When **lipid** rafts were disrupted with sterol-binding agents, methyl-**alpha-cyclodextrin** and filipin, FGF-2 binding to HSPG was reduced 2-5-fold, yet the amount and turnover of cell-surface HSPG were unaffected. Approx. 50-65% of bound FGF-2 was in **lipid** raft-associated fractions based on insolubility in unlabelled Triton X-100 and flotation in OptiPrep density gradients, and this level was increased with higher FGF-2 concentrations. Less FGF-2 (50-90%) was associated in raft fractions when cholesterol was depleted or HSPG were degraded with heparinase III. To investigate how **lipid** raft-HSPG interactions altered binding, we compared the rates of FGF-2 dissociation with native, MbetaCD (methyl-beta-cyclodextrin)- and filipin-treated cells. We found that FGF-2 dissociation rates were increased when **lipid** rafts were disrupted. These results suggest that localization of HSPG within **lipid** rafts creates high local concentrations of binding sites such that dissociation of FGF-2 is hindered. The localization of FGF-2 and HSPG to **lipid** rafts also correlated with the activation of protein kinase Calpha. Thus raft association of HSPG might create growth factor traps resulting in increased binding and signal transduction to enhance cell sensitivity.

L21 ANSWER 5 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:913189 HCAPLUS
DOCUMENT NUMBER: 139:394875
TITLE: Crystal structures of human CD1-ligand complexes for drug screening, rational drug design and treatment of infectious, neoplastic and autoimmune diseases
INVENTOR(S): Cerundolo, Vincenzo; Gadola, Stephan
PATENT ASSIGNEE(S): Isis Innovation Limited, UK
SOURCE: PCT Int. Appl., 154 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095487	A2	20031120	WO 2003-GB2069	20030514
WO 2003095487	A3	20040429		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 2002-11007 A 20020514

AB The present invention relates to methods of producing CD1/ligand complex comprising the steps of (a) obtaining a denatured CD1 protein; (b) contacting the denatured CD1 protein with ligand in an environment

comprising detergent; and (c) isolating the CD1/ligand complex. The invention further relates to uses of obtained CD1/ligand complex, the crystal structure thereof and to computer-based methods and systems for rational drug design, assessment of candidate modulator mols. and methods for determining homologous or analogous protein structures. The CD1 protein is denatured CD1b, CD1c or CD1d protein derived from Escherichia coli. The ligand may be any **lipid** and preferably glycolipid (e.g. ganglioside GM2 or α-galactosylceramide) or phospholipid (e.g. phosphatidylinositol).

L21 ANSWER 6 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:723666 HCAPLUS
DOCUMENT NUMBER: 139:245112
TITLE: Manufacture of plant component-cyclodextrin inclusion compounds and their uses
INVENTOR(S): Miwa, Shoji
PATENT ASSIGNEE(S): Ishikawa Prefecture, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003261441	A2	20030916	JP 2002-64750	20020311

PRIORITY APPLN. INFO.: JP 2002-64750 20020311

AB The compds., useful for foods, cosmetics, and pharmaceuticals, are manufactured by treatment of plants containing **lipid**-soluble components and starch with cyclodextrin synthetase (I) in **lipid**-soluble solvents. Brown rice powder and rice bran were treated with I in EtOH to give **alpha**.-, β-, and γ- **cyclodextrin** inclusion compds. containing vitamin E derivs., which showed antioxidant activity.

L21 ANSWER 7 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:382278 HCAPLUS
DOCUMENT NUMBER: 139:100182
TITLE: Effect of Cyclodextrinase on Dough Rheology and Bread Quality from Rice Flour
AUTHOR(S): Gujral, Hardeep Singh; Guardiola, Ignacio; Carbonell, Jose Vicente; Rosell, Cristina M.
CORPORATE SOURCE: Laboratorio de Cereales, Instituto de Agroquimica y Tecnologia de Alimentos (IATA-CSIC), Burjassot, 46100, Spain
SOURCE: Journal of Agricultural and Food Chemistry (2003), 51(13), 3814-3818
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The potential use of cyclodextrin glycosyl transferase (CGTase) as a rice bread improver is presented. The effect of CGTase addition to rice flour on dough rheol. and bread quality was investigated. In addition, an exptl. design was developed to optimize the levels of CGTase, hydroxypropylmethylcellulose (HPMC), and oil. The addition of CGTase produced a reduction in the dough consistency and also in the elastic modulus. With regard to the rice bread quality, better sp. volume, shape index, and crumb texture were obtained. The amount of cyclodextrins in the bread crumb

was quantified to explain the action of this enzyme. The data indicate that the improving effect of the CGTase results from a combination of its hydrolyzing and cyclizing activities, the latter being responsible for the release of cyclodextrins, which have the ability to form **complexes** with **lipids** and proteins.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:300798 HCAPLUS
DOCUMENT NUMBER: 137:139625
TITLE: Development of techniques for manufacture of intermediate materials using Oncorhynchus keta. 3. Deodorization for malodor generated during heat sterilization
AUTHOR(S): Narita, Seiichi
CORPORATE SOURCE: Aomori Prefect. Fish Process. Res. Lab., Hachinohe, 031-0831, Japan
SOURCE: Aomori-ken Suisanbutsu Kako Kenkyusho Kenkyu Hokoku (2002), Volume Date 2000 56-60
CODEN: ASKHEX; ISSN: 0912-1056
PUBLISHER: Aomori-ken Suisanbutsu Kako Kenkyusho
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

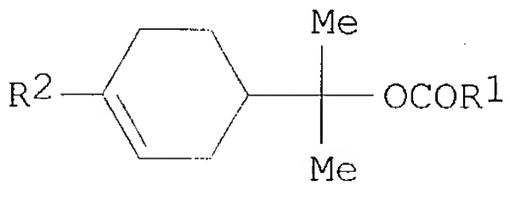
AB Oncorhynchus keta (a kind of salmon) decreases muscle **lipid**, fades pink muscle color, and changes skin color with growing. Also, the muscle of kita often produces malodor when processed the fillet. The salmon fillet was homogenized, packed, and heated at 100° for 30 min, and cooled immediately to make intermediate materials. The malodor was caused by H2S which probably arises from S-containing amino acids. Addition of 0.3% ribose, 0.7% arabinose, and 1.0% xylose or addition of carrot puree and vegetable oil with 1.5% xylose to the fillet was effective in suppressing generation of the malodor.

L21 ANSWER 9 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:359855 HCAPLUS
DOCUMENT NUMBER: 134:356811
TITLE: Cyclodextrin compositions for odor, insect and dust mite control
INVENTOR(S): Mao, Hsiang-Kuen; Chen, Gong-Xiang; Trinh, Toan
PATENT ASSIGNEE(S): The Procter + Gamble Company, USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001034213	A1	20010517	WO 1999-US26582	19991109

W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,

DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: WO 1999-US26582 19991109
OTHER SOURCE(S): MARPAT 134:356811
GI



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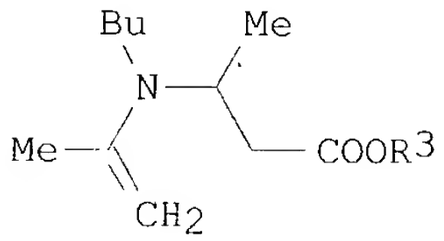

II

AB A stable, aqueous odor-absorbing, insect and dust mite controlling composition, preferably for use on inanimate surfaces. The composition comprises a solubilized, water-soluble, cyclodextrin and an effective amount of an insect and dust mite repellent active component, which can be N,N-**diethyl**-m-toluamide or an active component [I: R1 and R2 = C1-C10 saturated, straight or branched alkyl groups]. The active component is provided in an intimate mixture with an oily component capable of solubilizing the active component. The composition addnl. comprises adjuvant compds. selected from the following group: low mol. weight polyols; an aminocarboxylate chelator; an effective amount of metallic salt for improved odor benefit; an effective amount of solubilized, water-soluble, anti-microbial preservative; an effective amount, to kill, or reduce the growth of microbes, of cyclodextrin compatible and water soluble antimicrobial active; and mixts. thereof. An addnl. active component [II: R3 = -H or -(CH2)nCH3 and n = 1-10]. The present invention encompasses a method of spraying a mist of an effective amount of cyclodextrin solution onto household surfaces or fabrics.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 10 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-367106 [38] WPIDS
CROSS REFERENCE: 2001-032072 [01]; 2001-032073 [01]; 2001-041078 [01]; 2001-049870 [01]; 2001-049889 [01]; 2001-061375 [01]; 2001-061376 [01]; 2001-061377 [01]; 2001-061378 [01]; 2001-061379 [01]; 2001-061380 [01]; 2001-061383 [01]; 2001-061384 [01]; 2001-061385 [01]; 2001-061386 [01]; 2001-070855 [01]; 2001-070886 [01]; 2001-070887 [01]; 2001-070889 [01]; 2001-080332 [01]; 2001-080380 [01]; 2001-080391 [01]; 2001-091017 [01]; 2001-091018 [01]; 2001-091019 [01]; 2001-091020 [01]; 2001-102299 [01]; 2001-102300 [01]; 2001-102301 [01]; 2001-102302 [01]; 2001-146741 [01]; 2001-146742 [01]; 2001-146761 [01]; 2001-202518 [01]; 2001-244051 [01]; 2001-244052 [01]; 2001-244069 [09]; 2001-244070 [09]; 2001-257289 [01]; 2001-257290 [01]; 2001-257291 [01]; 2001-257292 [01]; 2001-257293 [01]; 2001-257336 [09]; 2001-257337 [09]; 2001-257338 [09]; 2001-257339 [09]; 2001-257341 [09]; 2001-257342 [09]; 2001-257343 [09]; 2001-257344 [09]; 2001-257345 [09]; 2001-265579 [01]; 2001-290116 [01]; 2001-328123 [24]; 2001-328124 [24]; 2001-335483 [24]; 2001-335752 [31]; 2001-354478 [09]; 2001-354825 [24]; 2001-355202 [31]; 2001-374344 [31]; 2001-380760 [01]; 2001-381052 [31]; 2001-389385 [01]; 2001-389410 [01];

2001-389418 [01]; 2001-397607 [31]; 2001-417832 [39]
DOC. NO. NON-CPI: N2001-267893
DOC. NO. CPI: C2001-112481
TITLE: Improved transfection of polynucleotides into cells, useful for gene therapy, comprises combining solubilized cholesterol as an additive to DNA **complexed** with a cationic **lipid**, a cationic polymer or a dendrimer.
DERWENT CLASS: A96 B04 D16 P34
INVENTOR(S): ESUVARANATHAN, K; LAWRENCIA, C; MAHENDRAN, R
PATENT ASSIGNEE(S): (GENE-N) GENECURE PTE LTD; (ESUV-I) ESUVARANATHAN K; (LAWR-I) LAWRENCIA C; (MAHE-I) MAHENDRAN R; (LUST-N) LUSTRE INVESTMENTS PTE LTD
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001015755	A2	20010308	(200138)*	EN	49
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AU 2000073275	A	20010326	(200138)		
NO 2002000983	A	20020424	(200241)		
EP 1208218	A2	20020529	(200243)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
US 2002146830	A1	20021010	(200269)		
JP 2003508456	W	20030304	(200319)		72

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001015755	A2	WO 2000-SG130	20000901
AU 2000073275	A	AU 2000-73275	20000901
NO 2002000983	A	WO 2000-SG130	20000901
		NO 2002-983	20020227
EP 1208218	A2	EP 2000-961303	20000901
		WO 2000-SG130	20000901
US 2002146830	A1	US 2002-86973	20020301
JP 2003508456	W	WO 2000-SG130	20000901
		JP 2001-520166	20000901

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000073275	A	Based on	WO 2001015755
EP 1208218	A2	Based on	WO 2001015755
JP 2003508456	W	Based on	WO 2001015755

PRIORITY APPLN. INFO: AU 1999-2593 19990901
AN 2001-367106 [38] WPIDS
CR 2001-032072 [01]; 2001-032073 [01]; 2001-041078 [01]; 2001-049870 [01]; 2001-049889 [01]; 2001-061375 [01]; 2001-061376 [01]; 2001-061377 [01];

2001-061378 [01]; 2001-061379 [01]; 2001-061380 [01]; 2001-061383 [01]; 2001-061384 [01]; 2001-061385 [01]; 2001-061386 [01]; 2001-070855 [01]; 2001-070886 [01]; 2001-070887 [01]; 2001-070889 [01]; 2001-080332 [01]; 2001-080380 [01]; 2001-080391 [01]; 2001-091017 [01]; 2001-091018 [01]; 2001-091019 [01]; 2001-091020 [01]; 2001-102299 [01]; 2001-102300 [01]; 2001-102301 [01]; 2001-102302 [01]; 2001-146741 [01]; 2001-146742 [01]; 2001-146761 [01]; 2001-202518 [01]; 2001-244051 [01]; 2001-244052 [01]; 2001-244069 [09]; 2001-244070 [09]; 2001-257289 [01]; 2001-257290 [01]; 2001-257291 [01]; 2001-257292 [01]; 2001-257293 [01]; 2001-257336 [09]; 2001-257337 [09]; 2001-257338 [09]; 2001-257339 [09]; 2001-257341 [09]; 2001-257342 [09]; 2001-257343 [09]; 2001-257344 [09]; 2001-257345 [09]; 2001-265579 [01]; 2001-290116 [01]; 2001-328123 [24]; 2001-328124 [24]; 2001-335483 [24]; 2001-335752 [31]; 2001-354478 [09]; 2001-354825 [24]; 2001-355202 [31]; 2001-374344 [31]; 2001-380760 [01]; 2001-381052 [31]; 2001-389385 [01]; 2001-389410 [01]; 2001-389418 [01]; 2001-397607 [31]; 2001-417832 [39]

AB WO 200115755 A UPAB: 20010711

NOVELTY - Transfecting a polynucleotide (PN) into cells comprising:

(a) combining at least one PN, (a combination of) a cationic **lipid** (I), a cationic polymer (II) or a dendrimer (III) and a solubilized cholesterol preparation (IV) to form a transfection composition; and

(b) applying the transfection composition to cells so that the cells are transfected with the PN, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) delivering a pharmaceutical agent into urothelial cells of a subject comprising:

(a) combining the pharmaceutical agent with (IV); and

(b) delivering the pharmaceutical composition intravesicularly into the bladder of the subject; and

(2) a transfection composition (V) comprising a PN, (I), (II), (III) and (IV).

ACTIVITY - Cytostatic.

The ability of DOTAP (1,2-diacyl-3-trimethylammonium propane) + methylated- beta -cyclodextrin containing cholesterol (DMBC) to deliver cytokines for the eradication of established tumors was tested. The transfection compositions comprising DNA encoding interleukin-2 (IL-2), interferon- gamma (IFN- gamma) and granulocyte macrophage-colony stimulating factor (GM-CSF) were injected into the right flank of tumor-bearing mice 7-10 days after tumor implantation. Tumor volume was significantly smaller for mice transfected with either IFN- gamma , GM-CSF or IL-2 + GM-CSF. 30% of all mice treated with IFN- gamma , GM-CSF and IL-2 + GM-CSF were cured.

MECHANISM OF ACTION - Gene therapy.

USE - (V) is useful for treating bladder cancer in a subject. The PN in (V) comprises an expression vector encoding a protein such as an interleukin (e.g. IL-1, IL-2, IL-6, IL-9, IL-11, IL-12, IL-13 and IL-18), an interferon (e.g. IFN- alpha , IFN- beta and IFN- gamma), granulocyte-macrophage colony stimulating factor (GM-CSF), macrophage colony stimulating factor (MCSF), heat shock protein (HSP), p53, vascular endothelial cell growth factor (VEGF) antagonist, a tissue inhibitor of metalloproteinase (TIMP) and a fibronectin receptor. Preferably, the expression vector encodes 2 or more of IL-2, GM-CSF and IFN- gamma . An additional bladder cancer treatment is performed with (V) such as Bacillus Calmette-Guerin (BCG) therapy (all claimed).

ADVANTAGE - The use of solubilized cholesterol as an additive enhances the transfection efficiency of DNA **complexed** with a cationic **lipid**, a cationic polymer or a dendrimer.

The pCMVlacZ expression plasmid was used to assess the transfection efficiency of various non-viral agents on MB49 cells. Both DOTAP (1,2-diacyl-3-trimethylammonium propane) and Superfect were able to transfect cells within a 2 hour time period with efficiencies of approx. 20.4 and 14.8% respectively, compared to 1.02 and 0% for Fugene and calcium chloride respectively.
Dwg.0/15

L21 ANSWER 11 OF 65 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 2001:678788 SCISEARCH
THE GENUINE ARTICLE: 465QE
TITLE: Characteristics of pyrene phospholipid/gamma-cyclodextrin complex
AUTHOR: Tanhuanpaa K; Cheng K H; Anttonen K; Virtanen J A; Somerharju P (Reprint)
CORPORATE SOURCE: Univ Helsinki, Inst Biomed, Dept Biochem, POB 63, Haartmaninkatu 8, FIN-00014 Helsinki, Finland (Reprint); Univ Helsinki, Inst Biomed, Dept Biochem, FIN-00014 Helsinki, Finland; Texas Tech Univ, Dept Phys, Lubbock, TX 79409 USA; Univ Helsinki, Dept Phys Chem, Inst Chem, FIN-00014 Helsinki, Finland
COUNTRY OF AUTHOR: Finland; USA
SOURCE: BIOPHYSICAL JOURNAL, (SEP 2001) Vol. 81, No. 3, pp. 1501-1510.
Publisher: BIOPHYSICAL SOCIETY, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998 USA.
ISSN: 0006-3495.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 48

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Recently, it was demonstrated that gamma -cyclodextrins (gamma -CDs) greatly accelerates transfer of hydrophobic pyrene-labeled and other fluorescent phospholipid derivatives from vesicles to cells in culture (Tanhuanpaa and Somerharju, 1999). To understand better the characteristics of this process, we studied the interaction of gamma -CD with pyrene-labeled phosphatidylcholines (PyrPCs) using a variety of physical methods. Either one or both of the acyl chains of PC was labeled with a pyrene moiety (monoPyrPCs and diPyrPCs, respectively), and the length of the labeled chain(s) varied from 4 to 14 carbons. Fluorescent binding assays showed that the association constant decreases strongly with increasing acyl chain length. PyrPC/gamma -CD stoichiometry was 1:2 for the shorter chain species, but changed to 1:3 when the acyl chain length exceeded 8 (diPyrPCs) or 10 (monoPyrPCs) carbons. The activation energy for the formation of diPyr(10)PC/gamma -CD complex was high, i.e., +92 kJ/mol, indicating that the phospholipid molecule has to fully emerge from the bilayer before complex formation can take place. The free energy, enthalpy, and entropy of transfer of monoPyrPC from bilayer to gamma -CD complex were close to zero. The absorption, Fourier transform infrared, and fluorescence spectral measurements and lifetime analysis indicated that the pyrene moiety lies inside the CID cavity and is conformationally restricted, particularly when the labeled chain is short. The acyl chains of a PyrPC molecule seem to share a CID cavity rather than occupy different ones. The present data provide strong evidence that the ability of gamma -CD to enhance intermembrane transfer of pyrene-labeled phospholipids is based on the formation of stoichiometric complexes in the aqueous phase. This information should help in designing CID derivatives that are more efficient **lipid** carriers then those **available** at present.

L21 ANSWER 12 OF 65 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2001:268708 BIOSIS
DOCUMENT NUMBER: PREV200100268708
TITLE: Encapsulated carotenoid preparations from high-carotenoid canola oil and cyclodextrins and their stability.
AUTHOR(S): Basu, Hemendra N. [Reprint author]; Del Vecchio, Anthony
CORPORATE SOURCE: 3201 Fox Ridge Court, Woodridge, IL, 60517, USA
hemen-basu@mediaone.net
SOURCE: Journal of the American Oil Chemists' Society, (April, 2001) Vol. 78, No. 4, pp. 375-380. print.
CODEN: JAOCA7. ISSN: 0003-021X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Jun 2001
Last Updated on STN: 19 Feb 2002

AB Cyclodextrin complexes were prepared using 1:1 and 1:0.5 molar ratios of cyclodextrins and high-carotenoid canola oil. beta-Cyclodextrin formed powdered complexes with a molar ratio of 1:0.5, cyclodextrin/high-carotenoid canola oil. With a 1:1 molar ratio, the complex was clumpy. In the case of **alpha-cyclodextrin**, powdery complexes were formed with either 1:1 or 1:0.5 molar ratio. The triglyceride oil present in the complexes varied between 28.87 and 48.2%, and there was no segregation of the triglyceride oil during complex formation. The stability of carotenoids and tocopherols was also the same in brown bottles whether the complexes were kept under nitrogen or under oxygen. In clear glass vials, the amounts of alpha-and beta-carotene went down, but there was very little change in tocopherols. With respect to sterols, more than 90% of the sterols present in the degummed oil were present in the **alpha-cyclodextrin** complexes, thereby indicating a higher affinity of the sterols in the cyclodextrin cavity.

L21 ANSWER 13 OF 65 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2002086574 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11814148
TITLE: Nutritional effects of cyclodextrins on liver and serum **lipids** and cecal organic acids in rats.
AUTHOR: Kaewprasert S; Okada M; Aoyama Y
CORPORATE SOURCE: Division of Applied Bioscience, Graduate School of Agriculture, Hokkaido University, Sapporo, Japan.
SOURCE: Journal of nutritional science and vitaminology, (2001 Oct) 47 (5) 335-9.
Journal code: 0402640. ISSN: 0301-4800.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 20020130
Last Updated on STN: 20020911
Entered Medline: 20020910

AB The effect of **dietary** cyclodextrins on liver and serum **lipids** and cecal organic acid production was investigated. Male Wistar rats were fed a basal **diet** and a **diet** containing 5% of **alpha**-, beta-, or gamma-**cyclodextrin**. The body weight gain in rats fed the **alpha-cyclodextrin diet** was not significantly different from rats fed the other three kinds of **diets**. The feeding of **dietary alpha -cyclodextrin** increased total **lipid** and phospholipids

in the liver. Beta-cyclodextrin significantly lowered serum total cholesterol and phospholipid levels compared with the basal **diet** et al. A decrease in serum triacylglycerol levels was also observed in beta-cyclodextrin-fed rats. **Dietary alpha-cyclodextrin** significantly increased the weight of cecal tissues and contents, and an approximate fourfold increase in acetate, propionate, and total organic acids was noted, indicating the fermentibility of beta-cyclodextrin compared with the basal **diet**. It seems likely that the suppression of serum cholesterol levels by **alpha**- and beta-**cyclodextrins** might be due to the increasing acetate and propionate productions in the cecum. cecal organic acid, cyclodextrin, serum cholesterol, rats

L21 ANSWER 14 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2000:34770 HCAPLUS
DOCUMENT NUMBER: 132:83692
TITLE: Transgene expression in polarized cells
INVENTOR(S): Eastman, Simon; Chu, Quiming; Tousignant, Jennifer D.; Fang, Shaona L.; Cheng, Seng H.; Scheule, Ronald K.
PATENT ASSIGNEE(S): Genzyme Corporation, USA
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000001418	A1	20000113	WO 1999-US15009	19990701
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2337794	AA	20000113	CA 1999-2337794	19990701
AU 9952077	A1	20000124	AU 1999-52077	19990701
EP 1091762	A1	20010418	EP 1999-937198	19990701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002519393	T2	20020702	JP 2000-557864	19990701
US 6465007	B1	20021015	US 1999-340509	19990701
PRIORITY APPLN. INFO.:			US 1998-91608P P	19980702
			WO 1999-US15009 W	19990701

AB The well-differentiated airway epithelium is the principal target tissue for gene therapy for the treatment of CF. However, recent studies have shown that gene delivery vehicles, such as cationic **lipid**:DNA **complexes**, can be inefficient at binding to and internalizing into polarized epithelial cells. The invention provides a method to improve gene therapy by using a compound capable of disrupting tight junctions. In the practice of the invention, the transfection of a biol. active mol. by a cationic amphiphile:biol. active mol. **complex** or other **lipid** or viral or nonviral vectors is improved by treating the cells with a class of compds. known in the art as absorption enhancers or tight junction disrupting compds.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 15 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:442191 HCAPLUS
DOCUMENT NUMBER: 133:42598

TITLE: Firm, stable pyruvic acid/carbohydrate(derivative) - aggregates and/or their hydrates and procedures for their production.
INVENTOR(S): Pischel, Ivo
PATENT ASSIGNEE(S): Skw Trostberg Ag, Germany
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 19935305	A1	20000629	DE 1999-19935305		19990728
GB 2344996	A1	20000628	GB 1999-30382		19991222
PRIORITY APPLN. INFO.:			DE 1998-19859754	A1	19981223
			DE 1999-19935305	A	19990728

AB Firm, stable pyruvic acid/carbohydrate aggregates and/or their hydrates contain the components pyruvic acid and carbohydrate in the weight ratio 0.01 to 1.0: 1. These aggregates can be used for the increase of endurance and strength in the sports area, for weight and body **fat** reduction and as **food** and feed supplements.

L21 ANSWER 16 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-271180 [23] WPIDS
DOC. NO. CPI: C2000-082691
TITLE: Use of cyclodextrin to stabilize N-(N-(3,3-dimethylbutyl)-1-alpha-aspartyl)-L-phenyl alanine-1-methyl ester.
DERWENT CLASS: B02 B05 D13 E13 E14
INVENTOR(S): BISHAY, I E; CLEARY, M; DESAI, N; FOTOS, J G; SCHROEDER, S
PATENT ASSIGNEE(S): (NUTR-N) NUTRASWEET CO
COUNTRY COUNT: 89
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000015049	A1	20000323	(200023)*	EN	46
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 9961504	A	20000403	(200034)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000015049	A1	WO 1999-US21471	19990916
AU 9961504	A	AU 1999-61504	19990916

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9961504	A	Based on	WO 2000015049

PRIORITY APPLN. INFO: US 1998-100867P 19980917
AN 2000-271180 [23] WPIDS
AB WO 200015049 A UPAB: 20000516
NOVELTY - A sweetener composition comprises N-(N-(3,3-dimethyl-butyl)-L-alpha -aspartyl)-L-phenyl alanine 1-methyl ester and cyclodextrin.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a process for stabilizing a sweetener composition comprising contacting cyclodextrin with N-(N-(3,3-dimethylbutyl)-L- alpha -aspartyl)-L-phenyl alanine-1-methyl ester (I) to form a mixture.

USE - The compositions are suitable for use in any **food** to replace natural sweeteners, as well as other high intensity sweeteners, normally used as sweeteners. The composition can be used for sweeting a beverage (such as carbonated soft drinks, powdered soft drinks, coffees, teas, juices, sweetened and flavoured waters, sport/energy/health drinks, alcoholic beverages, beverages processed with heating and hot-filled packaging and cold-filled beverages), a fluid dairy product (such as non-frozen, partially frozen and frozen milks, ice creams, sorbets and yogurts), a condiment (such as ketchup, mayonnaise, salad dressing, Worcestershire sauce, tomato sauce, chilli sauce and mustard), a baked good (such as cakes, cookies, pastries, breads and donuts), a frosting, a baking filling (such as a low or neutral pH filling, a high, medium or low solids filling, a fruit or milk based filling, a hot or cold make-up filling or a non-**fat** to full-**fat** filling), a candy or chewing gum or a table-top sweetener (claimed).

ADVANTAGE - The compositions are effective for enhancing the stability of (I) in the **foods** and beverages which are canned, bottled, pouched, packaged or packed in manners suitable for shipping and display at room temperature or in a chilled state.
Dwg.0/0

L21 ANSWER 17 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-163212 [15] WPIDS
DOC. NO. CPI: C2000-051125
TITLE: Micro and nano particles useful e.g. as carriers of medicines, and agrochemicals, absorbents for cosmetic purposes, and for separations and analysis..
DERWENT CLASS: A11 A96 B07 D13 D21 J04
INVENTOR(S): ANDRY, M; BUFFEVANT, C; EDWARDS, F; LEVY, M; PARIOT, N; PERRIER, E; REY-GOUTENOIRE, S; ANDRY, M C; LEVY, M C; REY, G S
PATENT ASSIGNEE(S): (COLE-N) COLETICA; (COLE-N) COLETICA SA; (ANDR-I) ANDRY M; (BUFF-I) BUFFEVANT C; (EDWA-I) EDWARDS F; (LEVY-I) LEVY M; (PARI-I) PARIOT N; (PERR-I) PERRIER E; (REYG-I) REY-GOUTENOIRE S
COUNTRY COUNT: 8
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
FR 2780901	A1	20000114	(200015)*		65
DE 19932216	A1	20000127	(200015)		
NL 1012517	C2	20000111	(200017)		
JP 2000038402	A	20000208	(200018)		26
KR 2000011579	A	20000225	(200102)		
US 6197757	B1	20010306	(200115)		
ES 2155793	A1	20010516	(200138)		
ES 2155793	B1	20011201	(200205)		
IT 1311514	B	20020313	(200251)		

JP 3437797 B2 20030818 (200356) 26

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2780901	A1	FR 1998-8809	19980709
DE 19932216	A1	DE 1999-1032216	19990709
NL 1012517	C2	NL 1999-1012517	19990705
JP 2000038402	A	JP 1999-196705	19990709
KR 2000011579	A	KR 1999-27476	19990708
US 6197757	B1	US 1999-350131	19990709
ES 2155793	A1	ES 1999-1547	19990709
ES 2155793	B1	ES 1999-1547	19990709
IT 1311514	B	IT 1999-TO599	19990709
JP 3437797	B2	JP 1999-196705	19990709

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 3437797	B2 Previous Publ.	JP 2000038402

PRIORITY APPLN. INFO: FR 1998-8809 19980709
AN 2000-163212 [15] WPIDS
AB FR 2780901 A UPAB: 20000323

NOVELTY - Particles comprise cell walls formed by the crosslinking of one or more mono- or oligosaccharides, using emulsion interfacial crosslinking, preferably at ambient temperature, of at least one primary alcohol group on the saccharide with a polyfunctional acylating agent, preferably a diacid halide (more preferably diacid chloride).

DETAILED DESCRIPTION - Particles comprise cell walls formed by the crosslinking of one or more mono- or oligosaccharides, using emulsion interfacial crosslinking, preferably at ambient temperature, of at least one primary alcohol group on the saccharide with a polyfunctional acylating agent, preferably a diacid halide (more preferably diacid chloride).

An INDEPENDENT CLAIM is also included for the preparation of the particles.

USE - The compositions are prepared for cosmetic, pharmaceutical, dietetic, agro-alimentary and agro-industrial purposes. Crosslinked cyclodextrin particles form inclusion complexes readily and these may also be used for the separation of stereoisomers, as catalysts, for the extraction of materials, for detoxification of liquids, and for analytical purposes. Cosmetics containing crosslinked cyclodextrin particles have the property of **absorbing** excess **lipids** form the skin, sweat degradation products, and the substances responsible for bad breath. The particles are also useful for preparing slow release pharmaceutical compositions.

DESCRIPTION OF DRAWING(S) - The figures a and b show the infra red spectra of the starting cyclodextrin and of the crosslinked microparticles respectively.

Dwg.2/4

L21 ANSWER 18 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:297284 HCAPLUS
DOCUMENT NUMBER: 130:329018
TITLE: Cleansing and conditioning article for skin or hair having improved fragrance delivery

INVENTOR(S): Hasenoehrl, Erik John; Gottlieb, Emily Elizabeth
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 92 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9921532	A1	19990506	WO 1998-US22212	19981020
W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2308005	AA	19990506	CA 1998-2308005	19981020
AU 9911079	A1	19990517	AU 1999-11079	19981020
AU 735322	B2	20010705		
EP 1024785	A1	20000809	EP 1998-953803	19981020
EP 1024785	B1	20030115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9815215	A	20001017	BR 1998-15215	19981020
JP 2001520983	T2	20011106	JP 2000-517692	19981020
AT 230976	E	20030215	AT 1998-953803	19981020
ES 2191349	T3	20030901	ES 1998-953803	19981020
MX 200004009	A	20001130	MX 2000-4009	20000425
PRIORITY APPLN. INFO.:			US 1997-957174 A	19971024
			WO 1998-US22212 W	19981020

AB The present invention relates to a substantially dry, disposable, personal cleansing product useful for both cleansing and conditioning the skin/hair and providing improved fragrance delivery. These articles are used by the **consumer** by wetting the dry article with water. The article comprises a water-insol. substrate, a lathering surfactant, and a fragrance-releasing complex. Preferably, the articles of the present invention further comprise a conditioning component. Use of the substrate enhances lathering at low surfactant levels, increases cleansing and exfoliation, optimizes delivery and deposition of conditioning ingredients, and provides desirable characteristics such as texture, thickness and bulk. As a result, this invention provides effective cleansing using low, and hence less irritating, levels of surfactant while providing superior conditioning benefits by using a substrate having desirable characteristics. The invention also encompasses products further comprising a coating material for encapsulating the fragrance-releasing complex. The invention also encompasses products comprising various active ingredients for delivery to the skin or hair. The invention also encompasses methods for manufacturing these products.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 19 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:618597 HCAPLUS
DOCUMENT NUMBER: 131:228025
TITLE: Processing of medicinal mushrooms, and crude drugs and

health **food** containing the processed products
INVENTOR(S): Miyake, Fuminori
PATENT ASSIGNEE(S): Ginas K. K., Japan; Hakusui Chem Industry, Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11262373	A2	19990928	JP 1998-69027	19980318

PRIORITY APPLN. INFO.: JP 1998-69027 19980318

AB Suspensions of mushrooms as materials for crude drugs and health **food**, other than Agaricus, are milled into microparticles by a wet jet mill. Active components in the mushrooms may be extracted after milling. The microparticles or exts. may be further treated with cyclodextrins by a wet jet mill for inclusion of the active components with the cyclodextrin. The method makes it possible to effective extraction of active components from mushrooms. Also claimed are crude drugs and health **food** containing the active components obtained as described above. Lentinus edodes powder was suspended in H2O and the suspension was processed by a wet jet mill at 30 MPa (flow rate at the confluent point 140 m/s) 3 passes and at 150 MPa (flow rate of the confluent point 290 m/s) 3 passes. The processed suspension showed particle size 7.62 μm with 100% cell breakage. Inclusion of active components in the suspension with cyclodextrin using a wet jet mill and spray-drying of the inclusion compds. were also shown.

L21 ANSWER 20 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1999-601334 [51] WPIDS
CROSS REFERENCE: 2000-664921 [64]
DOC. NO. CPI: C1999-175028
TITLE: Use of a non-maltogenic exoamylase for producing starch products, particularly baked **farinaceous** bread products, with reduced staling.
DERWENT CLASS: D11 D16
INVENTOR(S): DUEDAHL-OLESEN, L; KRAGH, K M; LARSEN, B; RASMUSSEN, P; ZIMMERMANN, W; RASSMUSSEN, P
PATENT ASSIGNEE(S): (DANI-N) DANISCO AS
COUNTRY COUNT: 87
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9950399	A2	19991007	(199951)*	EN	34
RW:	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW				
W:	AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW				
AU 9929530	A	19991018	(200010)		
BR 9909280	A	20001121	(200065)		
EP 1068302	A2	20010117	(200105)	EN	
R:	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE				
ZA 2000004817	A	20010531	(200134)		83
CN 1303427	A	20010711	(200159)		

KR 2001042255	A	20010525 (200168)	
JP 2002509720	W	20020402 (200225)	81
MX 2000009629	A1	20011201 (200282)	
AU 763250	B	20030717 (200356)	
NZ 506892	A	20031128 (200382)	
US 6667065	B1	20031223 (200408)	
US 2004043109	A1	20040304 (200417)	
RU 2225118	C2	20040310 (200428)	

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 9950399	A2		WO 1999-IB649	19990330
AU 9929530	A		AU 1999-29530	19990330
BR 9909280	A		BR 1999-9280	19990330
			WO 1999-IB649	19990330
EP 1068302	A2		EP 1999-910629	19990330
			WO 1999-IB649	19990330
ZA 2000004817	A		ZA 2000-4817	20000912
CN 1303427	A		CN 1999-806638	19990330
KR 2001042255	A		KR 2000-710789	20000928
JP 2002509720	W		WO 1999-IB649	19990330
			JP 2000-541287	19990330
MX 2000009629	A1		MX 2000-9629	20000929
AU 763250	B		AU 1999-29530	19990330
NZ 506892	A		NZ 1999-506892	19990330
			WO 1999-IB649	19990330
US 6667065	B1		WO 1999-IB649	19990330
			US 2001-647504	20010228
US 2004043109	A1	Div ex	WO 1999-IB649	19990330
		Div ex	US 2001-647504	20010228
			US 2003-669724	20030925
RU 2225118	C2		WO 1999-IB649	19990330
			RU 2000-127717	19990330

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9929530	A	Based on	WO 9950399
BR 9909280	A	Based on	WO 9950399
EP 1068302	A2	Based on	WO 9950399
JP 2002509720	W	Based on	WO 9950399
AU 763250	B	Previous Publ.	AU 9929530
		Based on	WO 9950399
NZ 506892	A	Based on	WO 9950399
US 6667065	B1	Based on	WO 9950399
US 2004043109	A1	Div ex	US 6667065
RU 2225118	C2	Based on	WO 9950399

PRIORITY APPLN. INFO: DK 1998-457 19980401
AN 1999-601334 [51] WPIDS
CR 2000-664921 [64]
AB WO 9950399 A UPAB: 20040429
NOVELTY - Use of a non-maltogenic exoamylase (NME) for retarding retrogradation of starch in starch products is new.
DETAILED DESCRIPTION - (A) A novel process for making a starch product comprises adding to a starch medium a NME that is capable of

hydrolyzing starch by cleaving off one or more linear maltooligosaccharides (MOSs), predominantly consisting of 4 to 8 D-glucopyranosyl units, from the non-reducing ends of the side chains of amylopectin.

INDEPENDENT CLAIMS are also included for the following:

(1) a NME obtainable from Bacillus clausii, or a functional equivalent, where the enzyme has a molecular weight of 101 kDa (as estimated by SDS-PAGE) and/or the enzyme has an optimum of activity of pH 9.5 and 550C, and

(2) use of an NME in a starch product to retard staling of the starch product.

USE - The process can be used for obtaining hydrolysis products such as maltotetraose, maltopentaose, maltohexaose, maltoheptaose or maltooctaose (claimed). The starch product may be a dough e.g. a baked **farinaceous** bread product (claimed).

ADVANTAGE - The starch products have retarded detrimental retrogradation properties, e.g. for retarding the staling of baked products.

Dwg.0/7

L21 ANSWER 21 OF 65 MEDLINE on STN DUPLICATE 6

ACCESSION NUMBER: 1999387006 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10455198
TITLE: Properties of a cyclodextrin-specific, unusual porin from Klebsiella oxytoca.
AUTHOR: Pajatsch M; Andersen C; Mathes A; Bock A; Benz R; Engelhardt H
CORPORATE SOURCE: Institute of Genetics and Microbiology, University of Munich, Maria-Ward-Strasse 1a, D-80638 Munich, Germany.
SOURCE: Journal of biological chemistry, (1999 Aug 27) 274 (35) 25159-66.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909
ENTRY DATE: Entered STN: 19991012
Last Updated on STN: 20021210
Entered Medline: 19990930

AB The function of CymA, 1 of the 10 gene products involved in cyclodextrin uptake and metabolism by Klebsiella oxytoca, was characterized. CymA is essential for growth on cyclodextrins, but it can also complement the deficiency of a lamB (maltoporin) mutant of Escherichia coli for growth on linear maltodextrins, indicating that both cyclic and linear oligosaccharides are accepted as substrates. CymA was overproduced in E. coli and purified to apparent homogeneity. CymA is a component of the outer membrane, is processed from a signal peptide-containing precursor, and possesses a high content of antiparallel beta-sheet. Incorporation of CymA into **lipid** bilayers and conductance measurements revealed that it forms ion-permeable channels, which exhibit a substantial current noise. CymA-induced membrane conductance decreased considerably upon addition of **alpha-cyclodextrin**. Titration experiments allowed the calculation of a half-saturation constant, K(S), of 28 microM for its binding to CymA. CymA assembled in vitro to two-dimensionally crystalline tubular membranes, which, on electron microscopy, are characterized by a p1-related two-sided plane group. The crystallographic unit cell contains four monomeric CymA molecules showing a central pore. The lattice parameters are a = 16.1 nm, b = 3.8 nm, gamma = 93 degrees.

CymA does not form trimeric **complexes** in **lipid** membranes and shows no tendency to trimerize in solution. CymA thus is an atypical porin with novel properties specialized to transfer cyclodextrins across the outer membrane.

L21 ANSWER 22 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:784767 HCAPLUS
DOCUMENT NUMBER: 132:121634
TITLE: Effects of amino acids, sugars, and ascorbic acid on the stability of linoleic acid hydroperoxide in the water phase
AUTHOR(S): Nishiike, Tamako; Ichikawa, Jun; Kikugawa, Noriko; Takamura, Hitoshi; Matoba, Teruyoshi
CORPORATE SOURCE: Division of Human Life and Environmental Sciences, Graduate School of Human Culture, Nara Women's University, Nara, 630-8506, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1999), 63(11), 1997-2000
CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Although **lipid** hydroperoxides are known to decrease **food** quality and safety, the stability of hydroperoxides in **foods** has hardly been investigated. Linoleic acid hydroperoxide (HPOD) decomposition by kinetic means with or without various **food** components was examined Most amino acids, especially lysine, arginine and tryptophan, stabilized HPOD, while cysteine and ascorbic acid accelerated its decomposition Sugars had little effect. According to activation energy calcns., it was found that the HPOD decomposition mechanism in reaction systems with various **food** components was similar to that in water.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 23 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:745191 HCAPLUS
DOCUMENT NUMBER: 132:122819
TITLE: Preparation of inclusion complexes of poly(ethylene glycol)-bearing artificial **lipids** with .**alpha**.-**cyclodextrin** and of a poly(rotaxane) based on the complex
AUTHOR(S): Nakashima, Naotoshi; Murakami, Hiroto; Kawamura, Mayumi; Kouso, Daisuke; Narikiyo, Yoshitaka; Matsumoto, Rika; Okuyama, Kenji
CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Engineering, Nagasaki University, Nagasaki, 852-8521, Japan
SOURCE: Polymer Journal (Tokyo) (1999), 31(11-2), 1089-1094
CODEN: POLJB8; ISSN: 0032-3896
PUBLISHER: Society of Polymer Science, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We synthesized eight different ω-amino-terminated poly(ethylene glycol)-bearing double-chain or triple-chain artificial **lipids** (PEG-**lipids**) with the mol. weight (Mw) of the poly(ethylene glycol) (PEG) moiety being 700, 1,000 or 1,600. The mixing of the aqueous bilayers of these **lipids** with α -**cyclodextrin** gradually formed crystalline inclusion complexes that were characterized by 1H

NMR and FTIR spectroscopies, differential scanning calorimetry (DSC), and X-ray anal. A large induced CD spectra was observed for an achiral bilayer of a chromophore-containing PEG-**lipid** during the initial stage of the complex formation process. The 1H NMR spectra revealed that the stoichiometry number of the α-CyD/ethylene glycol unit in the inclusion complexes was 1.8 - 2.2, suggesting that only the poly(ethylene glycol) moiety in the **lipids** interacted with α-CyD. The bilayer of a triple-chain PEG-**lipid** with Mw=700 of the PEG moiety and of a phenyl-containing triple chain PEG-**lipid** with Mw=1,600 of the PEG moiety maintained the bilayer phase transition even after the complex formation with α-CyD. On the contrary, the phase transition was lost via the complex formation of the bilayers of the double-chain PEG-**lipids** with Mw=700, 1,000 or 1,600, as well as of triple-chain **lipids** with Mw = 1,000 or 1,600 of the PEG moiety. The FTIR spectral data for the complexes suggested that the difference in the phase transition behavior would come from the change in the mol. cross-sectional area (top view) of the double-chain and triple-chain in the **lipids** , as well as in the chain length of the PEG moiety. Lastly, we describe the synthesis of a poly(rotaxane) of α-CyD based on the inclusion complex.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 24 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 7

ACCESSION NUMBER: 1999:197869 HCAPLUS
DOCUMENT NUMBER: 131:18239
TITLE: Effects of low molecular weight carbohydrates on **farinograph** characteristics and staling endotherms of wheat flour-water doughs
AUTHOR(S): Duedahl-Olesen, L.; Zimmermann, W.; Delcour, J. A.
CORPORATE SOURCE: Biotechnology Laboratory, Department of Civil Engineering, Aalborg University, Aalborg, DK-9000, Den.
SOURCE: Cereal Chemistry (1999), 76(2), 227-230
CODEN: CECHAF; ISSN: 0009-0352
PUBLISHER: American Association of Cereal Chemists
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Glucose, maltose, maltotriose, maltotetraose, α - and γ- **cyclodextrins**, and maltodextrins from potato starch (average d.p. [DP] of 17) and maize starch (average DP of 20) were added to wheat flour-water doughs at levels of 1.0 and 3.0% (based on dry flour weight). Addns. of 3.0% (weight/weight) α - and γ- **cyclodextrins** increased the 500 **farinograph** unit (FU) consistency by 174 and 193 FU, resp., while the same levels of potato and maize starch dextrins increased the consistency by 32 and 21 FU, resp. Expressed in an alternative way, the water absorption corresponding to 500 FU consistency was increased by 4.2 and 4.6% after addition of 3.0% (weight/weight) α - and γ- **cyclodextrins**, resp. Differential scanning calorimetry was used to evaluate the direct effects of addition of low mol. weight carbohydrates on amylopectin recrystn. in baked flour-water doughs. A significant reduction in amylopectin recrystn. was found after the addition of 3.0% (weight/weight) γ-cyclodextrin after 7 days of storage of the baked wheat flour-water dough.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 25 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8

ACCESSION NUMBER: 1998:248149 HCAPLUS
DOCUMENT NUMBER: 129:45226
TITLE: Experimental studies for screening the factors that influence the effectiveness of new multicomponent and protective liposomes
AUTHOR(S): Loukas, Yannis L.
CORPORATE SOURCE: Riga Ferreou 21, Athens, 163 43, Greece
SOURCE: Analytica Chimica Acta (1998), 361(3), 241-251
CODEN: ACACAM; ISSN: 0003-2670
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A computer-based technique using a 2(k-p) fractional factorial design was applied for screening the factors affecting the effectiveness of recently described multicomponent protective liposomal formulations. These formulations contain sodium ascorbate (vitamin C) as a model drug, sensitive to photochem. oxidation, in free or complexed with **.alpha .-cyclodextrin** form, as well as oil red O, deoxybenzone and oxybenzone as oil soluble light **absorbers**, incorporated into the **lipid** bilayer and sulisobenzone as a water soluble light absorber incorporated into the aqueous phase of liposomes. The presence or absence of these four different light absorbers in multilamellar liposomes containing the vitamin in free or complexed with α -**cyclodextrin** form, and the liposomes' preparation method comprised the six factors of the design, each factor being examined in two levels. The vitamin's stabilization ratio and percentage entrapment in liposomes were the two response variables to be optimized. The response variables were predicted by multiple regression equations comprising combinations of the six formulation factors. The entrapment values for all the materials were calculated, spectrophotometrically, using second order derivative spectrophotometry. High entrapment values and high protection of sodium ascorbate should characterize the optimum formulation.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 26 OF 65 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 1998271362 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9608435
TITLE: A computer-based expert system designs and analyzes a 2(k - p) fractional factorial design for the formulation optimization of novel multicomponent liposomes.
AUTHOR: Loukas Y L
CORPORATE SOURCE: School of Pharmacy, University of London, UK..
yloukas@compulink.gr
SOURCE: Journal of pharmaceutical and biomedical analysis, (1998 May) 17 (1) 133-40.
Journal code: 8309336. ISSN: 0731-7085.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980817
Last Updated on STN: 19980817
Entered Medline: 19980803

AB A computer-based technique based on a 2(k - p) fractional factorial design was applied for the optimization of recently described multicomponent protective liposomal formulations. These formulations contain sodium ascorbate (vitamin C) as a model drug sensitive to photochemical

oxidation, as well as oil red O and/or oxybenzone as oil soluble light **absorbers**, incorporated into the **lipid** bilayers and sulisobenzone as a water soluble light absorber incorporated into the aqueous phase of liposomes. The three light absorbers (present or absent) incorporated in multilamellar liposomes and the drug in free or in complexed with **alpha-cyclodextrin** form comprised the four factors of the system. The stabilization ratio and the percentage entrapment in the liposomes of the vitamin were the two response variables of the system to be optimized. The entrapment values were calculated for all the materials either spectrophotometrically or by using second order derivative spectrophotometry. The response variables were predicted by multiple regression equations comprising combinations of the four formulation factors. Both the higher entrapment and the higher protection for the drug should characterize the optimum formulation.

L21 ANSWER 27 OF 65 MEDLINE on STN DUPLICATE 10
ACCESSION NUMBER: 1998115059 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9452969
TITLE: Mechanism of **alpha-cyclodextrin** induced hemolysis. 2. A study of the factors controlling the association with serine-, ethanolamine-, and choline-phospholipids.
AUTHOR: Debouzy J C; Fauvelle F; Crouzy S; Girault L; Chapron Y; Goschl M; Gadelle A
CORPORATE SOURCE: CRSSA, Unite de Biophysique, La Tronche, France.
SOURCE: Journal of pharmaceutical sciences, (1998 Jan) 87 (1) 59-66.
Journal code: 2985195R. ISSN: 0022-3549.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199802
ENTRY DATE: Entered STN: 19980306
Last Updated on STN: 19980306
Entered Medline: 19980226

AB A nuclear magnetic resonance (NMR) spectroscopy and molecular modeling study of the interaction between **alpha-cyclodextrin** (**alpha**-CD) and phospholipids with serine, ethanolamine, or choline headgroups is presented. The experimental approach is based on 31P and 1H NMR measurements on small unilamellar vesicles (SUV), multilamellar systems (MLV), and aqueous suspensions of **lipids** using a direct **complex** preparation with alpha-CD. Molecular dynamics computer simulations are used to investigate the trajectory of alpha-CD in the vicinity of a membrane surface and the influence of the charge and dipole moment of the phospholipid headgroups. These factors of charge and orientation of dipole moment seem to play a key role in the interaction of phospholipids with alpha-CD and reflect very well the experimentally observed selectivity of the phospholipid -alpha-CD approach. However, with this approach, there is no evidence for the formation of a complex with the phospholipid headgroup (except for phosphatidylinositol) that results from electrostatic forces. Rather, after a possible extraction of the **lipid** from the membrane, a classical inclusion of the sn-2 chain in the cavity of alpha-CD occurs. This step depends on the alkyl chain length and saturation state of the **lipids** as well as on their organization (i.e., as vesicles or dispersions). Based on our results, chemical modifications of the alpha-CD molecule to control the hemolytic properties of alpha-CD are discussed.

L21 ANSWER 28 OF 65 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 11

ACCESSION NUMBER: 1998341263 EMBASE
TITLE: Cyclomaltooligosaccharide binding and solubilization of hydroxyfatty acid matrices in aqueous solution: Calorimetric titration and 13C NMR investigations of molecular recognition.
AUTHOR: Irwin P.L.; Brouillette J.N.; Osman S.F.; Hicks K.B.
CORPORATE SOURCE: P.L. Irwin, US Department of Agriculture ARS, Eastern Regional Research Center, 600 E. Mermaid Lane, Wyndmoor, PA 19038, United States. pirwin@arserrc.gov
SOURCE: Carbohydrate Research, (1998) 311/1-2 (37-49).
Refs: 33
ISSN: 0008-6215 CODEN: CRBRAT
PUBLISHER IDENT.: S 0008-6215(98)00206-7
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Cyclomaltooligosaccharides (cyclodextrins, CDs) increase cutinase activity with both naturally occurring and synthetic cuticular substrates. Little is known about the interactions of CDs with cutin or cutin-like substrates such as 16-hydroxypalmitate (16-OH-P). We report herein investigations into the thermochemistry of β-CD, hydroxypropyl-β-CD (HP-β-CD) or α-CD interactions with palmitic acid (P), 16-OH-P and polyesters (synthetic cutin) derived therefrom under conditions coincident with maximal cutinase activity (pH 9, glycine/NaOH buffer) at 25 °C using isothermal titration calorimetry (ITC). The thermodynamic parameters for HP-β-CD **.lipid** inclusion **complex** formation and subsequent solubilization, which were studied in heterogeneous phase suspensions, displayed enthalpy-entropy compensation typical of processes driven by solvation phenomena (α=TδΔS/ΔH=1.03, TΔS0=17.72kJmol-1; for 130 literature [α- and β-CD] values: α=0.92, TΔS0=15.11kJmol-1). In the 16-OH-P (Na+) experiments ΔH and ΔS (ΔH=42±8kJmol-1, ΔS=206±24Jmol-1K-1) values were large relative to those reported elsewhere for diverse CD·guest complexes (ΔH=-50 to 0 kJmol-1, ΔS=-170 to 30Jmol-1K-1) since ΔH resulted from the combined processes of binding and solubilization. 13C NMR and ITC experiments indicated that HP-β-CD.cntdot **.lipid complexes** had a 1:1 stoichiometry. A constant background **lipid** concentration-dependent endothermic process (ΔH(*)) also observed using both P and 16-OH-P substrates (ΔH(*) 4.8±0.5kJmol-1) as HP-β-CD was titrated into the heterogeneous **lipid** slurry. At a lower pH (6, 100mM Na+ phosphate buffer) neither a soluble HP-β-CD·16-OH-P complex was formed nor background ΔH(*) observed. At pH 9 no substantial binding was evident when synthetic cutin (ΔQ=-240.+-.61μJ, ΔQ(control)=-231±31μJ) was used as a substrate; a similar result was obtained using β-CD. Titrations using α-CD did, however, display a weak interaction (K=119±53M-1, ΔH=1.1±0.9kJmol-1, ΔS= 43.4±3.7Jmol-1K-1) with the synthetic cuticular matrix. Thus, either CDs do not bind to the insoluble cutin matrix or they do but with a small ΔH. The fact that HP-β-CD binds the synthetic cutin monomer and weak binding was observed in the α-CD·synthetic cutin system tends to argue

for the latter interpretation. Copyright (C) 1998 Elsevier Science Ltd.

L21 ANSWER 29 OF 65 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1997:313538 BIOSIS
DOCUMENT NUMBER: PREV199799604026
TITLE: Cyclodextrin enhanced fluorimetric determination of malonaldehyde by the thiobarbituric acid method.
AUTHOR(S): Castrejon, Sofia Erazo; Yatsimirsky, Anatoly K. [Reprint author]
CORPORATE SOURCE: Facultad de Quimica, Universidad Nacional Autonoma de Mexico, 04510 Mexico D.F., Mexico
SOURCE: Talanta, (1997) Vol. 44, No. 6, pp. 951-957.
CODEN: TLNTA2. ISSN: 0039-9140.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Jul 1997
Last Updated on STN: 26 Jul 1997

AB The enhancement effects of alpha-, beta-, gamma- and hydroxypropyl-beta-cyclodextrins on the fluorescence of a 2:1 thiobarbituric acid/malonaldehyde adduct in acid aqueous solutions have been studied. The best characteristics as a fluorescence enhancement agent showed hydroxypropyl-beta-cyclodextrin which bound the adduct sufficiently tightly (K = 180 1 mol-1) and caused a five-fold increase in its fluorescence. A kinetic-fluorimetric method of determination of malonaldehyde in the range 0.1-10 mu-M at room temperature with hydroxypropyl-beta-cyclodextrin as the enhancement agent is proposed and applied for the analysis of raw and cooked meat samples.

L21 ANSWER 30 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:447542 HCAPLUS
DOCUMENT NUMBER: 127:134948
TITLE: Preparation of low-cholesterol egg yolk oil
AUTHOR(S): Tabata, Takeo; Kato, Yasuhiko
CORPORATE SOURCE: Dep. Home Econ., Higashikyushu Women's Jr. Coll., Nakatsu, 871, Japan
SOURCE: Kyushu Kogyo Daigaku Kenkyu Hokoku, Kogaku (1997), 69, 53-57
CODEN: KKDKAN; ISSN: 0453-0357
PUBLISHER: Kyushu Kogyo Daigaku Kogakubu
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB In order to remove the cholesterol which is contained in large quantities in the egg yolk oil, α, β, and γ and branched cyclodextrins (CD) were added to the egg yolk. After blending, heating, grinding and drying the obtained egg yolk powder was subjected to extraction with several organic solvents. Cholesterol was not removed from the egg yolk oil to which α-CD and branched CD were added. Cholesterol was removed from the egg yolk oil to which β-CD and γ-CD were added. The nonpolar solvents such as di-Et ether and hexane afford higher removal efficiency than the polar solvent, EtOH. When the quantity of added β-CD was 15-20%, the low-cholesterol egg yolk oil was obtained. The acid value of egg yolk oil treated with β-CD was lower than that of nontreated egg yolk oil. There was no remarkable difference in fatty acid composition between treated and nontreated samples. The total content of tocopherol in the egg yolk oil was reduced somewhat by adding the β-CD.

L21 ANSWER 31 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:616574 HCAPLUS

DOCUMENT NUMBER: 125:274303
TITLE: Free fatty acid removal from used frying **fat**
INVENTOR(S): Conte, Joseph A.; Stauffer, Kenneth R.
PATENT ASSIGNEE(S): Campbell Soup Company, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5560950	A	19961001	US 1995-455682	19950531

PRIORITY APPLN. INFO.: US 1995-455682 19950531

AB Disclosed is a method for reducing the free fatty acid content of frying **fats** and oils that comprises heating the frying **fat** or oil to a temperature of less than about 120°C and stirring into the heated **fat** or oil less than about 10% by weight cyclodextrin and less than about 10% by weight powdered absorbent to form a slurry. The slurry mixture is allowed to react for less than about one and one half hours. The cyclodextrin, absorbent material and free fatty acids are then separated from the frying **fat** or oil, thereby reducing the free fatty acid content of the remaining frying **fat** or oil.

L21 ANSWER 32 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:2289 HCAPLUS
DOCUMENT NUMBER: 126:31579
TITLE: Method for producing carbohydrate fatty acid monoesters by enzymic esterification using lipase solubilized in organic solvent
INVENTOR(S): Tsuzuki, Wakako; Kobayashi, Shoichi
PATENT ASSIGNEE(S): Norinsuisansho Shokuhin Sogo, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245680	A2	19960924	JP 1995-77164	19950309
JP 2913010	B2	19990628		

PRIORITY APPLN. INFO.: JP 1995-77164 19950309
OTHER SOURCE(S): CASREACT 126:31579

AB Carbohydrate fatty acid monoesters are prepared by reacting a mixture of carbohydrates and fatty acids and/or **fats** with lipase solubilized in an organic solvent. Preferably the carbohydrates are mono- and oligosaccharides and cyclodextrin and the fatty acids are (un)saturated fatty acids and the **fats** are plant or animal **fats**. Lipase solubilized in organic solvent using surfactants is used in this reaction, which efficiently gives sugar monoesters in high yields (.apprx.90%) as compared to .apprx.20% yield for regular lipase. There is no limit for kinds of substrates selected among sugars and fatty acids and/or **fats** and a combination of these substrates can give a variety of sugar-fatty acid complexes, which are useful as emulsifying agents for **foods** and improving agents for phys. properties. Thus, a mixture of maltohexaose, palmitic acid, and lipase solubilized in an

organic solvent in hexane was shaken at 37° for 17 h to give 97% maltohexaose palmitate.

L21 ANSWER 33 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:194534 HCAPLUS
DOCUMENT NUMBER: 126:242777
TITLE: Drugs in cyclodextrins in liposomes: a novel approach to drug stability against photochemical oxidation
AUTHOR(S): Loukas, Y.L.; Vraka, V.; Gregoriadis, G.
CORPORATE SOURCE: Centre for Drug Delivery Research, School of Pharmacy, University of London, London, WC1N 1AX, UK
SOURCE: Proceedings of the International Symposium on Cyclodextrins, 8th, Budapest, Mar. 31-Apr. 2, 1996 (1996), 465-470. Editor(ś): Szejtli, J.; Szente, L. Kluwer: Dordrecht, Neth.
CODEN: 64CDAL
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Sodium ascorbate (SA) is oxidized in aqueous solns. by reaction with the dissolved oxygen and this process is accelerated by the presence of light (photochem. oxidation). In the present study we employed a novel system based on the combination of dehydration-rehydration liposomes, cyclodextrins and sunscreen agents in order to improve the stability of the drug. Anal. of various formulations revealed that a DRV liposomal formulation containing the α -**cyclodextrin** inclusion complex of the vitamin and incorporating the water soluble light **absorber** sulisobenzone and the **lipid** soluble light **absorber** oil red O provided maximum protection, increasing the half-life of SA from 56 min to 112.13 h.

L21 ANSWER 34 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:597799 HCAPLUS
DOCUMENT NUMBER: 127:245141
TITLE: Complexation of cyclodextrin derivatives with **lipids** and its application to clinical laboratory testing
AUTHOR(S): Sugiuchi, Hiroyuki; Irie, Tetsumi; Uekama, Kaneto
CORPORATE SOURCE: Sch. Med., Kumamoto Univ., Kumamoto, 860, Japan
SOURCE: Seibutsu Shiryo Bunseki (1996), 19(5), 295-304
CODEN: SSBUEL; ISSN: 0913-3763
PUBLISHER: Seibutsu Shiryo Bunseki Kagakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB In diagnostic prepns. cyclodextrins (CyDs) and their derivs. can be utilized as substrates, stabilizers, solubilizers and suppressors of interfering substances. This contribution focuses on the complex formation of CyDs with biol. **lipids** and its application to clin. laboratory testing. CyDs are capable of forming water-soluble or insol. complexes of a variety of **lipid** mols., depending upon their cavity size and substituent. When dimethyl-β-CyD was added to each lipoprotein fraction, an increase in turbidity of the mixture was observed only for the high-d. lipoprotein (HDL) fraction. In contrast, sulfated α-CyD (S-α-CyD) increased the turbidity of the chylomicron and very-low-d. lipoprotein fractions, probably due to macroparticle formation. A combination of s-α-CyD with polyethylene glycol-modified enzymes provided selectivity for determination of HDL-cholesterol in serum in the presence of magnesium ions and a small amount of dextran sulfate. This method can be

readily adapted for automated analyses as an online procedure for measuring the HDL-cholesterol in serum because it does not require any prior separation of the other lipoprotein fractions.

L21 ANSWER 35 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:713883 HCAPLUS
DOCUMENT NUMBER: 123:110646
TITLE: Slenderizing **food**
INVENTOR(S): Shiozu, Tatsuzo
PATENT ASSIGNEE(S): Hairu Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07115934	A2	19950509	JP 1993-298849	19931022

PRIORITY APPLN. INFO.: JP 1993-298849 19931022

AB A slenderizing **food** consists of α -**cyclodextrin** 100 and α -linolenic acid 0.5-20 parts by weight Thus, α -**cyclodextrin** 30 parts by weight relative to 3 parts by weight sesame oil containing 60% α-linolenic acid was added to lactose and starch 67 parts by weight and mixed. The effect of **food** containing both of these ingredients was superior with respect to prevention of body weight gain and obesity.

L21 ANSWER 36 OF 65 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 96114478 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8573280
TITLE: Amylolytic enzymes and products derived from starch: a review.
AUTHOR: Guzman-Maldonado H; Paredes-Lopez O
CORPORATE SOURCE: Instituto Nacional de Investigaciones Forestales y Agropecuarias (INIFAP-CAEB), Mexico.
SOURCE: Critical reviews in food science and nutrition, (1995 Sep) 35 (5) 373-403. Ref: 190
Journal code: 8914818. ISSN: 1040-8398.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199603
ENTRY DATE: Entered STN: 19960321
Last Updated on STN: 19960321
Entered Medline: 19960314

AB This review provides current information on starch and its molecular composition, common and potential sources, and manufacturing processes. It also deals with the five groups of enzymes involved in the hydrolysis of starch: the endo- and exoamylases, which act primarily on the alpha-1,4 linkages; the debranching enzymes, which act on the alpha-1,6 linkages; the isomerases which convert glucose to fructose; and the cyclodextrin glycosyltransferases which degrade starch by catalyzing cyclization and disproportionation reactions. This work mainly discusses the enzymatic processes for the manufacture of maltodextrins and corn syrup solids,

including the production, both batch and continuous, of glucose syrup, and the processes to obtain sweeteners, such as maltose and 42, 55, and 90% high-fructose corn syrups. It highlights the novel production of Schardinger's dextrins: the **alpha-**, beta-, and gamma-**cyclodextrins**, consisting of six, seven, and eight glucose monomers, respectively. New products are emerging on the market that can serve as **fat** and oil substitutes, moisture-retention compounds, crystal-formation controllers, stabilizers for volatile materials like flavors and spices, or products for the pharmaceutical industry. As a result, particular attention is given to functional properties and applications of the above-cited compounds.

L21 ANSWER 37 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:435615 HCAPLUS
DOCUMENT NUMBER: 122:190882
TITLE: Lipophilic cyclodextrin sulfate ammonium salts
INVENTOR(S): Taguchi, Kazuhiro
PATENT ASSIGNEE(S): Kogyo Gijutsuin, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06206906	A2	19940726	JP 1992-89648	19920313
JP 07005643	B4	19950125		
PRIORITY APPLN. INFO.:			JP 1992-89648	19920313

OTHER SOURCE(S): MARPAT 122:190882
AB The title cyclodextrin derivs. are prepared and useful as, e.g. **absorbents** for oils and **fats** in their recovery or separation Thus, sulfating α -**cyclodextrin** with SO3-NMe3 complex in DMF, working up, and mixing the resulting sulfate ester with dioctadecyldimethylammonium bromide gave a title salt.

L21 ANSWER 38 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:423975 HCAPLUS
DOCUMENT NUMBER: 123:86422
TITLE: Cyclodextrin uses: from concept to industrial reality
AUTHOR(S): Allegre, Mathilde; Deratani, Andre
CORPORATE SOURCE: Ringdex, Paris, F-75009, Fr.
SOURCE: Agro-Food-Industry Hi-Tech (1994), 5(1), 9-17
CODEN: AIHTEI; ISSN: 1120-6012
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 82 refs. on cyclodextrins (CDs), torus shaped mols. which have the remarkable ability to form mol. inclusion compds. with a wide range of mols., is presented. The apolar character of its cavity leads the CD to form complexes preferentially with hydrophobic mols. such as flavors, essential oils, lipophilic vitamins, sterols, and pharmaceutical actives, e.g. CDs can protect them against various degrdns. or solubilize them in water. They can also allow the extraction of a particular component from a medium. In the **food** industry, β-CDs are mainly used for flavor encapsulation or cholesterol extraction In cosmetics, CDs can be used for solubilization of actives, protection of perfumes, **absorption** of **lipids** on the skin and sustained release. In pharmaceuticals, the 2 main fields of application are bioavailability

improvement of drugs and bitter taste masking. Lastly, and more recently, CDs are very promising tools in chemical for extraction and separation of components.

Moreover, the appropriate chemical modification of CDs leads to specialty derivs. with improved properties.

L21 ANSWER 39 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:190191 HCAPLUS
DOCUMENT NUMBER: 120:190191
TITLE: Removal of residual cyclodextrin from **food**.
INVENTOR(S): Hedges, Allan; Shieh, Wen; Ammeraal, Robert
PATENT ASSIGNEE(S): American Maize-Products Co., USA
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9324022	A1	19931209	WO 1993-US3576	19930415
W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ, PL, PT, RO, RU, SD				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5532005	A	19960702	US 1992-891224	19920529
AU 9341047	A1	19931230	AU 1993-41047	19930415
EP 671889	A1	19950920	EP 1993-910618	19930415
EP 671889	B1	19991215		
R: AT, BE, CH, DE, DK, ES, FR, GB, IE, IT, LI, NL, PT, SE				
BR 9306448	A	19980630	BR 1993-6448	19930415
AT 187606	E	20000115	AT 1993-910618	19930415
ES 2142868	T3	20000501	ES 1993-910618	19930415
PT 671889	T	20000531	PT 1993-910618	19930415
CN 1080817	A	19940119	CN 1993-106406	19930529
NO 9404519	A	19941125	NO 1994-4519	19941125
PRIORITY APPLN. INFO.:			US 1992-891224 A	19920529
			WO 1993-US3576 A	19930415

AB The process entails treating a system, such as a **food**, which contains residual cyclodextrin, with both cyclodextrin glycosyl transferase and an amylase at 40- 80° and pH 4-6 for 1-48 h, to hydrolyze the residual cyclodextrin. The process is especially adapted for eggs, dairy, meat, fruit juices, coffee and tea. It is also suited for use in starch hydrolyzates and protein hydrolyzates. Residual cyclodextrins are contained in a system in which cyclodextrins have been employed to remove an unwanted component.

L21 ANSWER 40 OF 65 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
ACCESSION NUMBER: 94:296030 SCISEARCH
THE GENUINE ARTICLE: NK408
TITLE: FATTY-ACID CYCLODEXTRIN COMPLEXES - PROPERTIES AND APPLICATIONS
AUTHOR: SZENTE L (Reprint); SZEJTLI J; SZEMAN J; KATO L
CORPORATE SOURCE: CYCLOLAB, RES & DEV LAB, BUDAPEST, HUNGARY (Reprint); CATHERINE BOOTH HOSP, MONTREAL H4B 2J5, PQ, CANADA
COUNTRY OF AUTHOR: HUNGARY; CANADA
SOURCE: JOURNAL OF INCLUSION PHENOMENA AND MOLECULAR RECOGNITION IN CHEMISTRY, (1993) Vol. 16, No. 4, pp. 339-354.

ISSN: 0923-0750.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS
LANGUAGE: ENGLISH
REFERENCE COUNT: 35
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The complexation of fatty acids (both saturated and unsaturated) with various cyclodextrins and cyclodextrin derivatives greatly modifies their properties. Inclusion complex formation - depending upon the type of host cyclodextrin - may result in protection against the environment, in improved water solubility and **bioavailability**. Thus **lipid complexation** enables the preparation of more reliable diagnostic reagents, better chromatographic separations and higher yields in biotechnological processes. The relevant literature is reviewed with particular emphasis on the practical utility of the molecular encapsulation of fatty acids with cyclodextrins.

L21 ANSWER 41 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 13
ACCESSION NUMBER: 1992:403839 HCAPLUS
DOCUMENT NUMBER: 117:3839
TITLE: Process for the isolation and purification of monosialoganglioside (GM1) from a **lipid** mixture by **complexation** with **.alpha.-cyclodextrin**, and evidence for the complex
INVENTOR(S): Casu, Benito; Lanzarotti, Ennio; Torri, Giangiacomo; Naggi, Annamaria; Cedro, Armando
PATENT ASSIGNEE(S): Crinos Industria Farmacobiologica S.p.A., Italy
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 469352	A1	19920205	EP 1991-111469	19910710
EP 469352	B1	19931103		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 96804	E	19931115	AT 1991-111469	19910710
ES 2060257	T3	19941116	ES 1991-111469	19910710
US 5108613	A	19920428	US 1991-729728	19910715
JP 04230398	A2	19920819	JP 1991-174194	19910715
US 5152998	A	19921006	US 1992-834454	19920212
PRIORITY APPLN. INFO.:			IT 1990-20942	19900713
			EP 1991-111469	19910710
			US 1991-729728	19910715

AB Purification of GM1 (to ≥95%) is accomplished by complexation with **.alpha.-cyclodextrin** (I) and ultrafiltration. The GM1-I complex is recovered from the concentrated permeate by lyophilization or precipitation with acetone, and the GM1 is recovered from the complex by extraction with, e.g., CHCl3-MeOH (2:1). Several examples of the purification procedure are included. Also included are NMR spectra showing formation of the GM1-I complex.

L21 ANSWER 42 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1992-218645 [27] WPIDS
TITLE: New Klebsiella oxytoca strain KCCM 10002 - converting

starch selectively to **alpha-cyclodextrin**, used to form inclusion complexes for use in **food**, pharmaceuticals, etc..

DERWENT CLASS: B04 B07 C06 C07 D13 D16

INVENTOR(S): IK-BOO, K; JAE-HO, L; JANG-YOUN, C; KEE-HUYN, C; KEE-HYUN, C; CHOI, J; LEE, J; CHOI, J Y; CHOI, K H; KWON, I B; LEE, J H

PATENT ASSIGNEE(S): (LOTT-N) LOTTE CONFECTIONERY CO LTD; (LOTT-N) LOTTE SEIKA KK; (LOTT-N) LOTTE CONFECTIONERY CO

COUNTRY COUNT: 9

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 492426	A1	19920701	(199227)*	EN	7
R: CH DE FR GB LI SE					
JP 05199864	A	19930810	(199336)		5
KR 9301384	B	19930227	(199343)		
JP 06085713	B2	19941102	(199442)		5
EP 492426	B1	19950920	(199542)	EN	6
R: CH DE FR GB LI SE					
DE 69113228	E	19951026	(199548)		
US 5492829	A	19960220	(199613)		5

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
EP 492426	A1		EP 1991-121755	19911219
JP 05199864	A		JP 1991-353912	19911219
KR 9301384	B		KR 1990-21177	19901220
JP 06085713	B2		JP 1991-353912	19911219
EP 492426	B1		EP 1991-121755	19911219
DE 69113228	E		DE 1991-613228	19911219
			EP 1991-121755	19911219
US 5492829	A	CIP of	US 1991-811112	19911220
			US 1993-36212	19930323

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 06085713	B2	Based on	JP 05199864
DE 69113228	E	Based on	EP 492426

PRIORITY APPLN. INFO: KR 1990-21177 19901220

AN 1992-218645 [27] WPIDS

AB EP 492426 A UPAB: 19931006

Klebsiella oxytoca Number 19-1 (KCCM 10002) is a new strain. It digests starch to **alpha-cyclodextrin** (I) with very high selectivity. (I) is produced from starch by treatment with an enzyme preparation, containing cyclodextrin glucanotransferase (CGT), which is the culture medium used to grow K. oxytoca Number 19-1.

USE/ADVANTAGE - (I) is able to form inclusion cpds. with many organic (especially hydrophobic) cpds. so is useful in **foods**, pharmaceuticals, agricultural chemicals, etc. Typical uses are stabilisation, protection and improving water solubility of these cpds.; emulsification of **fats** and oils; control of chemical reactions, etc. (I) is more

soluble than beta-cyclodextrin (Ia) and is hardly effected by alpha-amylase. Unlike known (I)-producing strains, Number 19-1 produces (I) exclusively, without concomitant production of (Ia), so that additional processing stages such as gel filtration or organic solvent treatment are not needed
0/0

ABEQ EP 492426 B UPAB: 19951026
Klebsiella oxytoca No 19-1(Deposit No; KCCM 10002) having the ability to digest starch and to produce **alpha-cyclodextrin** with a very high selectivity from starch.
Dwg.0/2

ABEQ US 5492829 A UPAB: 19960329
An isolated microorganism which produces a cyclodextrin glycosyltransferase when cultivated with starch, in the presence of a nitrogen source under aerobic conditions, said cyclodextrin glycosyltransferase converts starch to cyclodextrin which is at least 95% **alpha-cyclodextrin;** said microorganism belonging to the genus Klebsiella species oxytoca, wherein said microorganism is Klebsiella oxytoca No. 19-1 (KCCM 1002).
Dwg.0/8

L21 ANSWER 43 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1992-050527 [07] WPIDS
DOC. NO. CPI: C1992-022440
TITLE: Compsn. for **dietetic** or therapeutic use - comprising complex of cyclodextrin and long chain polyunsaturated fatty acid or derivative.
DERWENT CLASS: B04 D13
INVENTOR(S): BRUZZESE, T; MOZZI, G
PATENT ASSIGNEE(S): (STAR-N) STAROIL LTD; (STRA-N) STRAOIL LTD
COUNTRY COUNT: 16
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 470452	A	19920212	(199207)*		6
R: AT BE CH DE ES FR GB IT LI LU NL					
NO 9103083	A	19920210	(199215)		
CA 2047884	A	19920210	(199218)		
PT 98606	A	19920630	(199230)		
US 5189149	A	19930223	(199310)		5
EP 470452	A3	19920429	(199329)		6
IT 1243192	B	19940524	(199440)		
JP 07002662	A	19950106	(199511)		6
EP 470452	B1	19951011	(199545)	EN	6
R: AT BE CH DE ES FR GB IT LI LU NL					
DE 69113713	E	19951116	(199551)		
ES 2079526	T3	19960116	(199610)		
NO 305034	B1	19990322	(199918)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 470452	A	EP 1991-112558	19910726
PT 98606	A	PT 1991-98606	19910808
US 5189149	A	US 1991-736565	19910726
EP 470452	A3	EP 1991-112558	19910726
IT 1243192	B	IT 1990-21257	19900809

JP 07002662	A	JP 1991-222295	19910807
EP 470452	B1	EP 1991-112558	19910726
DE 69113713	E	DE 1991-613713	19910726
		EP 1991-112558	19910726
ES 2079526	T3	EP 1991-112558	19910726
NO 305034	B1	NO 1991-3083	19910808

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69113713	E Based on	EP 470452
ES 2079526	T3 Based on	EP 470452
NO 305034	B1 Previous Publ.	NO 9103083

PRIORITY APPLN. INFO: IT 1990-21257 19900809
AN 1992-050527 [07] WPIDS
AB EP 470452 A UPAB: 19950207
A method is claimed for producing a complex containing at least a long chain polyunsaturated fatty acid (I) or derivative and cyclodextrin, by dissolving the cyclodextrin in water, adding the active oleaginous substance to the resulting solution to form a heterogeneous mixture which is stirred for 1-24 hrs at 0-100 deg.C to ppte. the desired complex in the form of a crystalline solid which is recovered by filtration, washing and drying. The cyclodextrin may be e.g. **alpha**-, beta- or gamma-**cyclodextrin** or hydroxypropyl-beta-cyclodextrin. (I) may be e.g. cis-5,8,11,14,17- eicosapentaenoic acid (EPA), cis-4,7,10,13,16,19-docosahexaenoic acid (DHA) or gamma-linolenic acid.

USE/ADVANTAGE - The method allows the production of complexes with a higher weight content of the oleaginous substance compared to the known method. The complexes are gliding, nearly odourless, tasteless powders which can be **dietetic** and pharmaceutical uses, e.g. **fat** lowering and platelet anticoagulant properties for the treatment and prevention of cardiovascular diseases. @(6pp Dwg.No.0/0
0/0

ABEQ US 5189149 A UPAB: 19931006
A complex consists of (A) at least 18, pref. 20-50 wt.% long chain polyunsatd. fatty acids, their salts and/or their 1-3C alkyl or glycerol esters and (B) a cyclodextin, pref. **alpha**-, beta- or gamma-**cyclodextrin** of OH-propyl-beta-cyclodextrin.

The acids pred. contain 18-22C and belong to (a) the omega-3 series, esp. eicosapenteanoic or docosahexeanoic acid or (b) the omega-6 series, esp. gamma-linolenic adic. The Et esters of the acids are used. The complex is prepared by (a) dissolving the cyclodextrin in, esp. distilled bater, (b) adding the acid (deriv.), (c) stirring the heterogeneous mixt. obtd. at 10-100 deg. C for 1-24 hrs. and (d) filtering the crystalline solid ppte. obtd., washing and drying it.

USE/ADVANTAGE - In **dietetic** or therapeutic prepns. contg. higher concns. of the acid derivs., e.g. fish oils, some vegetable oils, than known ones, allowing smaller dose to be administered. Solid prepns. are provided, free from unpleasant odour and taste and resitant to oxidative degradation. Use of hazardous solvents during the prodn. of the preparations is avoided.
0/0

ABEQ EP 470452 B UPAB: 19951114
A method of producing a complex containing at least one compound selected from the group consisting of eicosapentaenoic acid (EPA) and docosahexaenoic (sic) acid (DHA), a salt thereof of a 1-3C alkyl or glyceryl ester thereof and an alpha-, beta- or hydroxypropyl-beta-

cyclodextrin characterised in that said cyclodextrin is dissolved in water, said compound or the derivative thereof is added at room temp. to said aq. soln. to form a heterogeneous mixture which is submitted for a period of 1 to 24 hrs. to stirring at a temperature of between O deg. and 100 deg.C and wherefrom the complex precipitates in crystalline solid form and recovered by filtration, washing and drying.
Dwg.0/0

L21 ANSWER 44 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:590442 HCAPLUS
DOCUMENT NUMBER: 117:190442
TITLE: Retarded oxidation of liquid **lipids** entrapped in matrixes of saccharides or proteins
AUTHOR(S): Imagi, Jun; Muraya, Koji; Yamashita, Daisuke; Adachi, Shuji; Matsuno, Ryuichi
CORPORATE SOURCE: Fac. Agric., Kyoto Univ., Kyoto, 606-01, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1992), 56(8), 1236-40
CODEN: BBBIEJ; ISSN: 0916-8451
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Me linoleate (ML), linoleic acid (LA), and Et eicosapentaenoate (EE) were entrapped in saccharide and protein matrixes, and then stored at 37° in a desiccator controlled at 75% relative humidity. ML entrapped with α -**cyclodextrin**, maltodextrin, and pullulan was extremely resistant to autoxidn., but LA entrapped with maltodextrin and pullulan rapidly oxidized. LA entrapped with . **alpha.-cyclodextrin** was the most stable against oxidation ML entrapped with gelatin or gum arabic was less resistant to autoxidn. than that entrapped with pullulan; there was little difference in the susceptibility to oxidation between ML and LA entrapped with gelatin or gum arabic. Egg albumin protected ML more effectively against oxidation than LA, while sodium caseinate protected LA more than ML. EE entrapped with pullulan was highly resistant to oxidation, 90% of the total **lipid** remaining after 35 days. The effect on the oxidation of diffusion of oxygen through the matrix was estimated Retardation of oxidation of the entrapped **lipid** can not be explained only by the effect of diffusion.

L21 ANSWER 45 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:578241 HCAPLUS
DOCUMENT NUMBER: 117:178241
TITLE: Cyclodextrins as nasal absorption promoters of insulin: mechanistic evaluations
AUTHOR(S): Shao, Zezhi; Krishnamoorthy, Ramesh; Mitra, Ashim K.
CORPORATE SOURCE: Sch. Pharm. Pharm. Sci., Purdue Univ., West Lafayette, IN, 47907, USA
SOURCE: Pharmaceutical Research (1992), 9(9), 1157-63
CODEN: PHREEB; ISSN: 0724-8741
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The safety and effectiveness of cyclodextrins (CD) as nasal absorption promoters of peptide-like macromols. have been investigated. The relative effectiveness of the cyclodextrins in enhanceing insulin nasal absorption was found to be in the descending order of dimethyl-β-**cyclodextrin** (DMβCD) > α -**cyclodextrin** (α -CD) > β- **cyclodextrin** (β-CD), hydroxypropyl-β-cyclodextrin (HPβCD) > γ-cyclodextrin (γ-CD). A direct relationship linking absorption promotion to nasal membrane protein release is evident, which in turn correlates well with

nasal membrane phospholipid release. The magnitude of the membrane damaging effects determined by the membrane protein or phospholipid release may provide an accurate, simple, and useful marker for predicting safety of the absorption enhancers. In order to estimate further the magnitude of damage and specificity of cyclodextrin derivs. in solubilizing nasal membrane components, the enzymic activities of membrane-bound 5'-nucleotidase (5'-ND) and intracellular lactate dehydrogenase (LDH) in the perfusates were also measured. HPβCD at a 5% concentration was found to result in only minimal removal of epithelial membrane proteins as evidenced by a slight increase in 5'-ND and total absence of LDH activity. On the other hand, 5% DMβCD caused extensive removal of the membrane-bound 5'-ND. Moreover, intracellular LDH activity in the perfusate increased almost linearly with time. The cyclodextrins are also capable of dissociating insulin hexamers into smaller aggregates, and this dissociation depends on cyclodextrin structure and concentration Enhancement of

insulin diffusivity across nasal membrane through dissociation may provide an addnl. mechanism for cyclodextrin promotion of nasal insulin absorption.

L21 ANSWER 46 OF 65 MEDLINE on STN DUPLICATE 14
ACCESSION NUMBER: 92395514 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1522488
TITLE: Hydroxypropylcyclodextrins in parenteral use. II: Effects on transport and disposition of **lipids** in rabbit and humans.
AUTHOR: Irie T; Fukunaga K; Garwood M K; Carpenter T O; Pitha J; Pitha J
CORPORATE SOURCE: Gerontology Research Center, National Institute on Aging, National Institutes of Health, Baltimore, MD 21224.
SOURCE: Journal of pharmaceutical sciences, (1992 Jun) 81 (6) 524-8.
Journal code: 2985195R. ISSN: 0022-3549.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199210
ENTRY DATE: Entered STN: 19921023
Last Updated on STN: 19921023
Entered Medline: 19921009

AB Hydroxypropyl ethers of cyclodextrins, after parenteral administration, come into contact with **lipids** in tissues and in circulation and form water-soluble inclusion **complexes** with these **lipids** . A single intravenous administration of hydroxypropyl-beta-cyclodextrin to a hereditary hyperlipidemic Watanabe rabbit slightly and temporarily decreased the level of total cholesterol in serum. Single injections of hydroxypropyl-**alpha-cyclodextrin** and of the corresponding gamma-homologue, both of which are less potent solubilizers of cholesterol, had lesser effects. Repeated administration of hydroxypropyl-beta-cyclodextrin to rabbits led to a gradual increase in total cholesterol in circulation and eventually to a slight relief of atherosclerotic lesions in the thoracic aorta. The only untoward effects of repeated treatments (total doses of up to 40 g/kg) were vacuoles in cells of proximal convoluted tubules in the kidneys. Repeated administration also strongly increased cholesterol in urine, probably because of excretion of the soluble cholesterol-hydroxypropyl-beta-cyclodextrin complex. Proteins in urine increased significantly, whereas triglycerides increased only moderately after repeated administrations. Intravenous infusion of hydroxypropyl-beta-cyclodextrin into a patient

with hypervitaminosis A led to a release of liver-stored retinoids into serum in quantities much higher than those that could be directly solubilized by hydroxypropyl-beta-cyclodextrin. Levels of total cholesterol in the circulation of this patient decreased during the infusion. Thus, hydroxypropylcyclodextrins may serve as artificial **lipid** carriers in the circulation, and because the exchanges that involve inclusion complexation occur very quickly, the presence of hydroxypropylcyclodextrins in organisms may catalytically augment the establishment of equilibria in **lipid** distribution.

L21 ANSWER 47 OF 65 MEDLINE on STN DUPLICATE 15
ACCESSION NUMBER: 92395513 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1522487
TITLE: Hydroxypropylcyclodextrins in parenteral use. I: **Lipid** dissolution and effects on **lipid** transfers in vitro.
AUTHOR: Irie T; Fukunaga K; Pitha J
CORPORATE SOURCE: Gerontology Research Center, National Institute on Aging, National Institutes of Health, Baltimore, MD 21224.
SOURCE: Journal of pharmaceutical sciences, (1992 Jun) 81 (6) 521-3.
Journal code: 2985195R. ISSN: 0022-3549.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199210
ENTRY DATE: Entered STN: 19921023
Last Updated on STN: 19921023
Entered Medline: 19921009

AB Hydroxypropyl ethers of cyclodextrins form water-soluble inclusion **complexes** with **lipids**. Of the three hydroxypropylcyclodextrins examined, hydroxypropyl-**alpha-cyclodextrin** had limited specificity for phospholipids, and hydroxypropyl-beta-cyclodextrin had limited specificity for cholesterol, and hydroxypropyl-gamma-cyclodextrin was nonspecific. The formation of inclusion complexes was found to be a fast and reversible process in which complexation of cholesterol did not inhibit its oxidation by cholesterol oxidase, and cholesterol of the erythrocyte membrane could be exchanged within a minute for cholesteryl methyl ether which was in the inclusion complex. Thus, hydroxypropylcyclodextrin in the circulation may catalyze the transport of **lipids** in the direction of equilibrium distribution.

L21 ANSWER 48 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:254199 HCAPLUS
DOCUMENT NUMBER: 116:254199
TITLE: Properties of agents that effectively entrap liquid **lipids**
AUTHOR(S): Imagi, Jun; Yamanouchi, Taroh; Okada, Kentaro; Tanimoto, Masahiro; Matsuno, Ryuichi
CORPORATE SOURCE: Fac. Agric., Kyoto Univ., Kyoto, 606-01, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1992), 56(3), 477-80
CODEN: BBBIEJ; ISSN: 0916-8451
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A droplet of an oil-in-water emulsion of Me linoleate in a saccharide or protein solution that contained with a surfactant, stabilizer, or both was

dehydrated by drying equipment (single droplet) that resembled a spray drier. The **lipid** exposed on the surface of dehydrated samples was extracted and measured by gas chromatog. Gum arabic or gelatin without additives resulted in little **lipid** being exposed; they were good entrapping agents. Little **lipid** was exposed with a pullulan solution containing lecithin, sugar ester, CM-cellulose, or Na caseinate but much was exposed with a maltodextrin solution containing any of the surfactants tested. When both the surfactant lecithin and the stabilizer xanthan gum were added to the emulsion prepared in a maltodextrin solution, **lipid** was not detected. Thus, effective liquid **lipid** entrapping agents cause much emulsification, stabilize the emulsion (i.e., they cause the continuous phase to be very viscous), and create a dehydrated matrix of fine, dense network layers.

L21 ANSWER 49 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:579303 HCAPLUS
DOCUMENT NUMBER: 119:179303
TITLE: Utilization of cyclodextrin as **fat** soluble compound carrier to serum-free culture of rat astrocytes
AUTHOR(S): Nakama, Akihiko
CORPORATE SOURCE: Osaka City Inst. Public Health Environ. Sci., Osaka, 543, Japan
SOURCE: Annual Report of Osaka City Institute of Public Health and Environmental Sciences (1992), Volume Date 1991, 54, 48-53
CODEN: AOISDR; ISSN: 0285-5801
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB α -**Cyclodextrin complexes** with **fat**-soluble vitamins and unsatd. fatty acids were prepared and examined as replacements for bovine serum albumin as **fat**-soluble compound carriers on cultured rat astrocytes. In serum-supplemented medium, it was difficult to evaluate the effects of **fat**-soluble compds. in serum on cell growth. Therefore, serum-free chemical defined medium supplemented with growth factors, hormones, and nutrients was developed for rat astrocytes to evaluate these effects. α -**Cyclodextrin** complexes with 3 vitamins (vitamin A acetate, E, and K1) and 3 fatty acids (linoleic, linolenic, and oleic acids) showed growth promoting activities for astrocytes in serum-free medium. Usually, supplementing **fat**-soluble compds. to a cell culture medium is very difficult, especially to a low or no protein medium, but α -**cyclodextrin** can replace albumin as a **fat**-soluble compound carrier in serum-free cell cultures.

L21 ANSWER 50 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:11028 HCAPLUS
DOCUMENT NUMBER: 116:11028
TITLE: Cosmetic powders containing inclusion compounds of water-insoluble ingredients with cyclodextrin polymer-hydroxyalkylated cyclodextrin mixtures
INVENTOR(S): Matsuda, Haku; Ito, Kenzo; Taki, Akio; Uejima, Osamu
PATENT ASSIGNEE(S): Shiseido Co., Ltd., Japan; Japan Maizu Products Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03058906	A2	19910314	JP 1989-195792	19890728

PRIORITY APPLN. INFO.: JP 1989-195792 19890728

AB Skin cosmetics and cosmetic powders contain inclusion compds. of H2O-insol. compds. with cyclodextrin polymer-hydroxyalkylated cyclodextrin mixts. The cosmetics are transparent, stable, and are applied easily. β-Cyclodextrin (I) (10 g) was treated with aqueous NaOH, NaBH4, and 3 mL epichlorohydrin at 50° for 3 h to give 15 g I copolymer (II). I (100 g) was treated with aqueous NaOH and 50 mL propylene oxide at 30° for 20 h to give hydroxypropylated (5.1 mol) I (III). II-III mixture 7.0, 2-hydroxy-4-methoxybenzophenone 0.05, 4-tert-butyl-4'-methoxydibenzoylmethane 0.01, hinokitiol 0.01, and H2O 20.0 weight% were mixed to give inclusion compds., which were mixed with H2O 29.9299, polyethylene glycol 1.0, sponge gourd extract 1.0, iris extract 1.0, denatured 95% EtOH 40.0, and pigment 0.0001 weight% were mixed to give a skin lotion.

L21 ANSWER 51 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:654556 HCAPLUS
DOCUMENT NUMBER: 115:254556
TITLE: Powderization of liquid-state **lipids**
AUTHOR(S): Matsuno, Ryoichi; Imagi, Jun
CORPORATE SOURCE: Agric. Coll., Kyoto Univ., Kyoto, Japan
SOURCE: New Food Industry (1991), 33(5), 57-64
CODEN: NYFIAM; ISSN: 0547-0277
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Liquid-state **lipids** (linoleic acid, Me linoleate, or Me oleate) were powderized by adsorption on gum arabic, starch, maltodextrin, . **alpha.-cyclodextrin**, maltose, glucose, or CM-cellulose. **Lipids** adsorbed on α **-cyclodextrin**, gum arabic, or CM-cellulose had high stability. The emulsifying activity of the **lipid**-adsorbent **complex** is described.

L21 ANSWER 52 OF 65 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1991:203318 BIOSIS
DOCUMENT NUMBER: PREV199191106543; BA91:106543
TITLE: EMULSIFYING PROPERTIES OF **ALPHA CYCLODEXTRINS** BETA **CYCLODEXTRINS** AND GAMMA CYCLODEXTRINS.
AUTHOR(S): SHIMADA K [Reprint author]; OHE Y; OHGUNI T; KAWANO K; ISHII J; NAKAMURA T
CORPORATE SOURCE: DEP FOOD NUTRITION, YAMAGUCHI WOMEN'S UNIV, 3-2-1, SAKURABATAKE, YAMAGUCHI 753, JPN
SOURCE: Journal of the Japanese Society for Food Science and Technology (Nippon Shokuhin Kogyo Gakkaishi), (1991) Vol. 38, No. 1, pp. 16-20.
CODEN: NSKGAX. ISSN: 0029-0394.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: JAPANESE
ENTRY DATE: Entered STN: 2 May 1991
Last Updated on STN: 14 Jun 1991

AB The emulsifying properties of α -, β- and γ- **cyclodextrins** (CD) were investigated by use of a series of soybean oil-water (1:1, v:v) systems. The minimum CD concentration of oil

emulsification was about 0.5% for α-CD, 0.25% for β-CD and 2% for γ-CD, respectively. The emulsifying activity (EA) and emulsion stability (ES) increased with increasing concentration of each CD. The amount of inclusion complexes formed during emulsification was related to the behavior of emulsifying properties. The lowering ability of interfacial tension at an oil/water interface (β-CD > α-CD » γ-CD) was compatible with the order of minimum CD concentration for emulsification. EA and ES increased with increasing concentration of xanthan gum or tragacanth gum added in the emulsifying systems. The addition of sodium chloride did not affect EA and ES, while citric acid inhibited emulsification. The CD emulsion added xanthan gum or tragacanth gum was resistant to the freeze-treatment. EA and amount of inclusion complexes decreased with emulsifying temperature and the emulsion was not formed over 50°C even the addition of xanthan gum or tragacanth gum.

L21 ANSWER 53 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 16
ACCESSION NUMBER: 1990:617975 HCAPLUS
DOCUMENT NUMBER: 113:217975
TITLE: Solubilization of **lipid**-soluble vitamins by **complexation** with glucosyl β-cyclodextrin
AUTHOR(S): Okada, Yasuyo; Tachibana, Michiko; Koizumi, Kyoko
CORPORATE SOURCE: Fac. Pharm. Sci., Mukogawa Women's Univ., Nishinomiya, 663, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1990), 38(7), 2047-9
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Inclusion complex formation of 8 kinds of **lipid**-soluble vitamins with 6-O-α -D-glucopyranosyl β- **cyclodextrin** (G-β-CD) in aqueous solution and in solid phase were assessed by the solubility method and thermal anal. All **lipid**-soluble vitamins were highly solubilized in water by complexation with G-β-CD. From anal. of the phase solubility diagram, the stoichiometric ratio of the main complex in water was estimated to be 1:2 for vitamin A alc./G-β-CD, 1:2 for vitamin D2/G-β-CD, 1:1 for vitamin D3/G-β-CD, 1:3 for vitamin E/G-β-CD, 1:4 for vitamin E nicotinate/G-β-CD, 1:3 for vitamin K1/G-β-CD, 1:3 for vitamin K2/G-β-CD, and 1:1 for vitamin K3/G-β-CD. The stabilities of **lipid**-soluble vitamines in water containing G-β-CD were examined A vitamin E nicotinate-G-β-CD complex solution was stable even underirradn. with light.

L21 ANSWER 54 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 17
ACCESSION NUMBER: 1990:459722 HCAPLUS
DOCUMENT NUMBER: 113:59722
TITLE: Inclusion **complexes** of **lipids** with branched cyclodextrins
AUTHOR(S): Okada, Yasuyo; Koizumi, Kyoko; Ogata, Koichi; Ohfuji, Takehiko
CORPORATE SOURCE: Fac. Pharm. Sci., Mukogawa Women's Univ., Nishinomiya, 663, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1989), 37(11), 3096-9
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The interactions of fatty acids, monoacylglycerols, diacylglycerols, and

triacylglycerols with α -**cyclodextrin** (CD), β-CD, 6-O-α-D-glucosyl-α-CD (G-α-CD), and 6-O-α-D-glucosyl-β-CD (G-β-CD) were investigated by the solubility method and by differential scanning calorimetry. The complexation ability of G-α-CD for **lipids** was superior to that of G-β-CD. The reactivity of **lipids** with CDs increased in the order fatty acid ≥ monoacylglycerol >> diacylglycerol > triacylglycerol, and unsatd. **lipids** formed **complexes** more easily than corresponding saturated **lipids**. The complexation abilities of branched CDs and the parent CDs appeared to be almost the same, but the enhancement of **lipid** solubility by the branched CD, particularly by G-α-CD was much more marked than that by the parent CD.

L21 ANSWER 55 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:421939 HCAPLUS
DOCUMENT NUMBER: 109:21939
TITLE: Manufacture of confectionery cream puff shells using caseins and cyclodextrins
INVENTOR(S): Ichioka, Kenji; Niwa, Hiroshi
PATENT ASSIGNEE(S): Tsukishima Shokuhin K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63024842	A2	19880202	JP 1986-168092	19860718
JP 01013812	B4	19890308		
PRIORITY APPLN. INFO.:			JP 1986-168092	19860718

AB Heated oils and **fats** are emulsified with 10-30% (based on total composition) aqueous phase containing alkali caseins and 0.1-4.0% (based on total composition) cyclodextrin and cooled rapidly. Thus, an oily phase comprising beef tallow/rapeseed oil/pal oil (30/10/60) 82.2, glycerin monoester 0.5, propylene glycol monoester 0.05, and soybean lecithin 0.1% was emulsified with an aqueous phase containing H2O 15.0, Na casein 1.0, and Dexy Pearl K-50 (. **alpha**.-**cyclodextrin** 50% purity) 1.0%, then cooled rapidly to give a **fat**-oil composition A mixture of flour 300, H2O 390, egg 630, the composition 450, (NH4)2CO3 3, and NaHCO3 1.5 g was baked at 210° to give a cream puff shell with good color and texture.

L21 ANSWER 56 OF 65 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 18
ACCESSION NUMBER: 1988:371226 BIOSIS
DOCUMENT NUMBER: PREV198886055136; BA86:55136
TITLE: CARBON-13 CP-MAS NMR STUDIES OF AMYLOSE INCLUSION COMPLEXES CYCLODEXTRINS AND THE AMORPHOUS PHASE OF STARCH GRANULES RELATIONSHIPS BETWEEN GLYCOSIDIC LINKAGE CONFORMATION AND SOLID-STATE CARBON-13 CHEMICAL SHIFTS.
AUTHOR(S): GIDLEY M J [Reprint author]; BOCIEK S M
CORPORATE SOURCE: UNILEVER RES LAB, COLWORTH HOUSE, SHARNBROOK, BEDFORD MK44 1LQ, UK
SOURCE: Journal of the American Chemical Society, (1988) Vol. 110, No. 12, pp. 3820-3829.

CODEN: JACSAT. ISSN: 0002-7863.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 18 Aug 1988
Last Updated on STN: 18 Aug 1988

AB In order to characterize molecular conformation within starch granules and to examine the relationship between polysaccharide conformation and solid state 13C chemical shifts, a range of polymeric and oligomeric α-(1 → 4) glucans has been examined by cross polarization and magic angle spinning (CP/MAS) 13C NMR spectroscopy. Single helical amylose (polymeric α-(1 → 4) glucan) polymorphs with various molecular inclusions as well as α - and β- **cyclodextrin** hydrates have been studied and their 13C CP/MAS spectral features compared with those of both double helical and amorphous α-(1 → 4) glucans. Spectra of single helical amyloses show similar features irrespective of the nature of the included molecule and have only one resolved signal for each carbon site consistent with the nearly hexagonal packing of sixfold helices as characterized by X-ray diffraction. Cyclodextrin hydrates show resolved C-1 and C-4 resonances from each of the six (α -**cyclodextrin**) or seven (β- **cyclodextrin**) α -(1 → 4)-linked glucose residues present in the macrocycle. Chemical shift ranges in cyclodextrins are closely similar to those of single helical amyloses with the exception of one C-1 and C-4 resonance in α - **cyclodextrin** which are at unusally high field and assigned to sites adjacent to a conformationally strained glycosidic bond. A comparison of solution chemical shifts with weighted averages of solid-state shifts suggests that β-cyclodextrin adopts glycosidic solution conformation similar to those found in the crystalline state but that α -**cyclodextrin** may be slightly more expanded in solution than in the crystalline state. Line widths in the α-(1 → 4) glucans studied can be rationalized in terms of crystalline perfection, and signal multiplicity arises through either intramolecular conformational effects (α - and β- **cyclodextrin**) or considerations of packing symmetry (double helical α-(1 → 4) glucans). The wide range of chemical shifts observed for C-1 and C-4 sites together with the essentially constant chemical shifts for other sites suggest that C-1 and C-4 chemical shifts are primarily determined by glycosidic linkage conformation. Correlations are found between C-1 chemical shifts and the sum of the moduli of the two torsion angles (.vphi. and ψ) describing rotation about the glycosidic bonds as well as with the modules of ϕ. Both correlations accurately predict the range and qualitatively predict the distribution of chemical shifts found for amorphous α-(1 → 4) glucans assuming the equiprobable occurrence of all allowed glycosidic conformations. Similarities in C-1 and C-4 chemical shifts for single helical amyloses and amorphous materials show that starch granule amorphous phases contain a significant fraction of single-helix-like local conformation. This observation is consistent with the presence of α-(1 → 4) glucan/ **lipid** inclusion **complexes** within starch granules.

L21 ANSWER 57 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:210186 HCAPLUS
DOCUMENT NUMBER: 108:210186
TITLE: Manufacture of dolichol complexes with cyclodextrins for enhancement of dolichol bioavailability
INVENTOR(S): Kimura, Sokiro; Kageyu, Akira

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62207211	A2	19870911	JP 1986-50086	19860306
PRIORITY APPLN. INFO.:			JP 1986-50086	19860306

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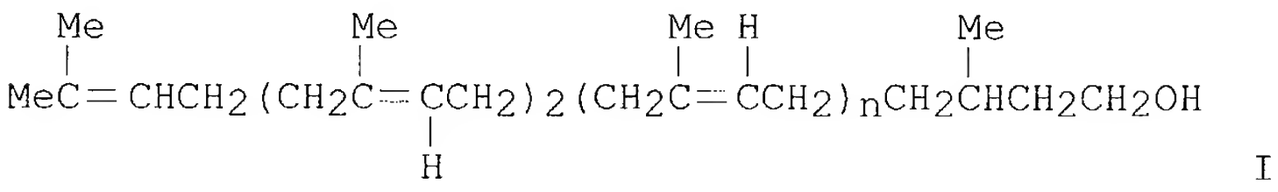

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AB Pharmaceutical **lipid complexes** are prepared by combining cyclodextrins and dolichols (I; n = 12-18) and/or pharmaceutically active I esters, where the weight ratio of cyclodextrin to I is kept at 1:1-1:30. I 100, α -**cyclodextrin** 1000, and H2O 1000 mg were mixed and left under 0.1 mmHg pressure at 60° overnight to give a pharmaceutical powder. A significant increase in bioavailability of I from this product was demonstrated in rats.

L21 ANSWER 58 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:422242 HCAPLUS
DOCUMENT NUMBER: 107:22242
TITLE: Health **foods** for weight reduction
INVENTOR(S): Saito, Hitoshi
PATENT ASSIGNEE(S): Kokusai K. K., Japan; Nissei Kosan K. K.
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62011072	A2	19870120	JP 1985-149725	19850708
JP 62044905	B4	19870924		
PRIORITY APPLN. INFO.:			JP 1985-149725	19850708

AB A health **food** for weight reduction is formulated from 100 parts . **alpha.-cyclodextrin** and 0.5-10 parts γ-linolenic acid. The product enhances **fat** metabolism and controls blood cholesterol level and blood pressure.

L21 ANSWER 59 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:48987 HCAPLUS
DOCUMENT NUMBER: 106:48987
TITLE: α-Linolanic acid-containing **fat** and oil composition as health **food**
INVENTOR(S): Sato, Mitsukatsu; Yagi, Yoshiaki; Ishikura, Tomoyuki

PATENT ASSIGNEE(S): Sanraku Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61233625	A2	19861017	JP 1985-72580	19850408
JP 05014686	B4	19930225		
PRIORITY APPLN. INFO.:			JP 1985-72580	19850408

AB Oil and **lipid** compns. containing α -linolenic acid-**cyclodextrin** inclusion compound are a health **food.** Thus, 90 g β-cyclodextrin in 200 mL H2O and 10 g Oenothera biennis oil (containing α-linolenic acid) were vigorously blended and freeze dried to give 98.2 g powder. The preparation was stable at 60° for up to 10 days.

L21 ANSWER 60 OF 65 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:4837 HCAPLUS
DOCUMENT NUMBER: 104:4837
TITLE: **Foods** containing anticholesteremic cyclodextrins
PATENT ASSIGNEE(S): Suzuki, Masashige, Japan; Toyo Create Co., Ltd.; Nichino Kagaku Kogyo K. K.; Ensuiko Sugar Refining Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60094912	A2	19850528	JP 1983-201033	19831028
PRIORITY APPLN. INFO.:			JP 1983-201033	19831028

AB **Foods**, which decrease neutral **fats** in the body, contain β- [7585-39-9], γ- [17465-86-0], and .**alpha**.-**cyclodextrin** [10016-20-3] as anticholesteremics. Thus, flour 60, sugar 60, α -**cyclodextrin** composition 50, egg 180, and butter 120 g were mixed and made into a cake. The anticholesteremic activity of cyclodextrin was demonstrated in rats.

L21 ANSWER 61 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1985-304887 [49] WPIDS
DOC. NO. CPI: C1985-131736
TITLE: Oral antibacterial compsns. - containing cephalosporin and cyclodextrin.
DERWENT CLASS: B02 B04
INVENTOR(S): HIRAI, S; KOYAMA, H; MAKINO, T
PATENT ASSIGNEE(S): (TAKE) TAKEDA CHEM IND LTD
COUNTRY COUNT: 12
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

EP	163433	A	19851204	(198549)* EN	45
	R: BE CH DE FR GB IT LI NL SE				
JP	60233012	A	19851119	(198601)	
US	4616008	A	19861007	(198643)	
JP	62030713	A	19870209	(198711)	
CA	1240268	A	19880809	(198836)	
EP	163433	B	19900801	(199031)	
	R: BE CH DE FR GB IT LI NL SE				
DE	3578947	G	19900906	(199037)	
JP	08000777	B2	19960110	(199606)	22

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 60233012	A	JP 1984-89050	19840502
US 4616008	A	US 1985-728503	19850429
JP 62030713	A	JP 1986-69352	19860326
JP 08000777	B2	JP 1986-69352	19860326

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 08000777	B2 Based on	JP 62030713

PRIORITY APPLN. INFO: JP 1984-89050 19840502; JP 1985-75082 19850408; JP 1986-69352 19860326

AN 1985-304887 [49] WPIDS

AB EP 163433 A UPAB: 19930925

Solid antibacterial compsns. for oral admin. comprise a **lipid**-soluble cephalosporin (I) and a cyclodextrin (II).

Pref. (I) has a n-octanol/H2O partition coefft. of 100-1000 and is of formula (Ia), R1 = acyl, especially CO-R5-R4; R2 = H, alkoxymethyl, alkylthiomethyl, carbamoyloxymethyl or opt. substd. heterocyclylmethyl or heterocyclylthiomethyl; R3 = an ester residue, R4 = aminothiazolyl; R5 = alkylene or C=NOR6; R6 = H or opt. substd. alkyl. Pref. (II) is **alpha-cyclodextrin** (IIa). The compsns. are formulated as tablets and also contain an organic acid. The (II):(I) weight ratio is 10-70:100.

ADVANTAGE - (II) improves the gastrointestinal absorption of (I).

0/0

ABEQ EP 163433 B UPAB: 19930925

An antibacterial solid composition for oral administration which comprises a **lipid** soluble cephalosporin compound and a cyclodextrin.

ABEQ US 4616008 A UPAB: 19930925

Antibacterial solid compsn. for oral admin. comprises 20-95 wt.% **lipid**-sol. cephalosporin with n-octanol/water partition coefft. 100-1000 and 10-70 wt.% **alpha**,beta or gamma-**cyclodextrin** with 5-150% organic acid. The cyclodextrin is tri-O-methyl-, di-O-methyl- or triamino-cyclodextrin. The cephalosporin is of formula (I) where R1 is acyl; R2 is H, alkoxymethyl, carbamoyloxymethyl, alkylthiomethyl, acyloxymethyl, heterocyclic methyl or thiomethyl opt. substd.; R3 is ester.

The organic acid is citric, maleic, fumaric, tartaric, succinic, malic, oxalic, mandelic, ascorbic, malonic or benzoic. Pref. R1 is R4-R5-CO- in which R4 is alkylene or -C=NOR5; R5 is alkyl opt. substd. Esp. cephalosporin is 1-(cyclohexyloxycarbonyloxy) -ethyf-

7-beta-(2-(2-aminothiazol-4-yl) thio) methyl)ceph-3-em-4- carboxylate.
USE - Renders **lipid**-sol. antibiotic **absorbable** from G.I. tract by complexation with cyclodextrin which also gives sustained release action. Esterified carbonyl at 4-position is hydrolysed enzymatically giving high blood concns. Used against Gram positive and negative and resistant bacterial infections at dosage e.g., 0.05-1g; 2-4/day.

L21 ANSWER 62 OF 65 MEDLINE on STN DUPLICATE 19
ACCESSION NUMBER: 85292192 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4032075
TITLE: Nutritional significance of cyclodextrins: indigestibility and hypolipemic effect of **alpha-cyclodextrin**.
AUTHOR: Suzuki M; Sato A
SOURCE: Journal of nutritional science and vitaminology, (1985 Apr) 31 (2) 209-23.
Journal code: 0402640. ISSN: 0301-4800.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198510
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19851002

AB Digestibility of **alpha-** and beta-**cyclodextrin** (CD) and nutritional consequences of alpha-CD and a CD mixture (n-dextrin, alpha-, beta-and gamma-CDs = 50, 30, 15 and 5% by weight) were investigated in rats. In contrast with beta-CD, alpha-CD was revealed to be indigestible. Growing rats were fed on **diets** supplemented with the CD mixture at 19.5, 39, 58.5 and 78% levels for 110 days, resulting in smaller weight gain and body **fat** deposition when they were fed on a higher CD **diet**. Rates of weight loss during the restricted feeding were faster in rats fed on a higher CD **diet**. These were due to **food** efficiency lowered by CD. Reduced serum and liver triacylglycerol (TG) levels were noted during a 110-day period of feeding of the CD **diets**, and the former was revealed due to a reduced hepatic-intestinal TG secretion rate. Rats fed on a 78% CD **diet**, which contained alpha-CD at the 24% level, showed abnormal symptoms such as poor appetite and constipation with gas accumulation in the large intestine, and some of them died during the first 2-week feeding period. However, the surviving animals showed adaptation to the **diet** in the later period of the 110-day feeding. These results suggest that alpha-CD may be classified as **dietary** fiber which can modulate **lipid** metabolism in rats. Furthermore, the CD mixture may be available as a calorie substitute for weight control, which may owe mostly to alpha-CD.

L21 ANSWER 63 OF 65 MEDLINE on STN DUPLICATE 20
ACCESSION NUMBER: 83267199 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6875391
TITLE: Effect of cyclodextrins on the solubilization of lignoceric acid, ceramide, and cerebroside, and on the enzymatic reactions involving these compounds.
AUTHOR: Singh I; Kishimoto Y
CONTRACT NUMBER: HD-10981 (NICHD)
NS-13559 (NINDS)
NS-13569 (NINDS)

SOURCE: Journal of lipid research, (1983 May) 24 (5) 662-5.
Journal code: 0376606. ISSN: 0022-2275.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198309
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19970203
Entered Medline: 19830909

AB **alpha-Cyclodextrin** at concentrations of 1-8 mM helps dissolve, in aqueous solution, fatty acids such as lignoceric, stearic, and palmitic, and **complex lipids** such as ceramide and cerebroside that contain these acids. Formation of an inclusion complex was indicated on examination of the solution by gel filtration. **alpha-Cyclodextrin** strikingly increased synthesis of ceramide from sphingosine and either free lignoceric or stearic acid by rat brain preparations. These results suggest the further use of **alpha-cyclodextrin** in **lipid** enzymology, especially in relation to sphingolipid metabolism.

L21 ANSWER 64 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1978-26150A [14] WPIDS
TITLE: Edible odorant-containing oil and **fat** compsn. - used for enhancing **food** aroma, contains cyclodextrin and odorant.
DERWENT CLASS: A97 D23
PATENT ASSIGNEE(S): (TAKS) TAKASAGO PERFUMERY CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 53018775	A	19780221	(197814)*		

PRIORITY APPLN. INFO: JP 1976-92042 19760803
AN 1978-26150A [14] WPIDS
AB JP 53018775 A UPAB: 19930901
Edible odourant-containing oil and **fat** compsn. contains cyclodextrin and odourant. Natural or artificial flavours e.g. butter, spice, milk, cream, etc. can be included in cyclodextrin by adding water to cyclodextrin to obtain the pasty mixture adding 0.1-2 times weight based on cyclodextrin of the odourant to the paste and kneading the mixture for 1-12 (1-3) hrs. Pref. **alpha-cyclodextrin**, beta-**cyclodextrin** and gamma-cyclodextrin are used.

The thermal resistance and the retaining property of the odourant are improved. The perfume can be stored for >=3 months.

Cyclodextrin does not harm the edible oil and **fat**, breads, confectioneries, etc. prepared using it.

L21 ANSWER 65 OF 65 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1977-18801Y [11] WPIDS
TITLE: Improving water retaining properties of emulsified **foods** - by addition of a cyclic dextrin-**fat** prod..
DERWENT CLASS: D13
PATENT ASSIGNEE(S): (KANF) KANEGAFUCHI CHEM KK

COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 52012955	A	19770131	(197711)*		
JP 58023063	B	19830512	(198323)		

PRIORITY APPLN. INFO: JP 1975-88720 19750718
AN 1977-18801Y [11] WPIDS
AB JP 52012955 A UPAB: 19930901
To the emulsified **food** of 'Oil in water' type such as cream and mayonase and aqueous spread such as custard cream prepd from egg yolk and cows milk, 1-20% of **fat**-including cpd. of cyclic dextrin are added.

The cpds. is prepared by adding one **fat** such as mono-, di- or tri-glyceride or phospholipid, emulsifier such as fatty ester of sorbitan and propylene glycol, or carotinoid to cyclic dextrin such as **alpha**-cyclodextran and beta-**cyclodextrin**.

The obtd. aqueous spread has the same appearance and form as the aqs. spread containing no cpd., but also has excellent water holding and shape-maintaining properties.